

636557

REPORT NUMBER: 214-CAL-03-08

**SAFETY COMPLIANCE TESTING FOR FMVSS 214
SIDE IMPACT PROTECTION
INDICANT**

HONDA OF AMERICA MFG., INC.
2003 HONDA ELEMENT
MPV

NHTSA NUMBER: C35307

VERIDIAN ENGINEERING TEST NUMBER: 8675-F214-08

VERIDIAN ENGINEERING
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May 6, 2003

FINAL REPORT

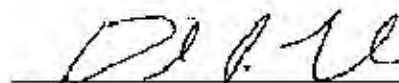
U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance
400 Seventh Street, SW
Room 6111 (NVS-220)
Washington, DC 20590

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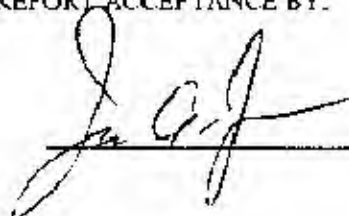

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16. Abstract <p>A 55/28 kph 90° Side Impact (Moving Deformable Barrier) Indicant Test was conducted on the subject Honda Element MPV. This test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001). This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on May 6, 2003.</p> <p>The impact velocity of the Moving Deformable Barrier (MDB) was 61.48 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21°C. The target vehicle post-test maximum crush was 175 mm at level 2.</p> <p>The test or target vehicle's performance is given below:</p> <table border="1"> <thead> <tr> <th></th> <th>Front SID HB</th> <th>Rear SID HB</th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td>36.7 g's</td> <td>83.3 g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td>34.0 g's</td> <td>87.0 g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td>47.8 g's</td> <td>52.6 g's</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td>42 g's</td> <td>70 g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td>59 g's</td> <td>56 g's</td> </tr> </tbody> </table> <p>The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.</p>							Front SID HB	Rear SID HB	Left Upper Rib Acceleration:	36.7 g's	83.3 g's	Left Lower Rib Acceleration:	34.0 g's	87.0 g's	Lower Spine Acceleration:	47.8 g's	52.6 g's	Thoracic Trauma Index (TTI):	42 g's	70 g's	Pelvis Acceleration (PEV):	59 g's	56 g's
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SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-02-D-01114. The purpose of this indicant test was to evaluate side impact protection in a 2003 Honda Element MPV when tested at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001).

SECTION 2

SUMMARY OF SIDE IMPACT TEST

This Side Impact Protection Inducant Test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001).

A 2003 Honda Element MPV was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 61.48 kph (38.2 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on May 6, 2003. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the Side Impact Hybrid III Dummies (SID H3s) are included in Appendix A.

Two restrained Side Impact Hybrid III Dummies (SID H3s) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the OCWS Side Impact Laboratory Test Procedure which is dated July, 1997. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SID H3s were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y direction)
2. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial and redundant accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)
5. Nine Axis Array Heads (NAAH)
6. Head triaxial accelerometers (X-, Y- and Z-direction)
7. Upper neck force and moment (X-, Y and Z direction) load cells

A summary of the Side Impact Hybrid III Dummy (SID H3) configuration and verification test data can be found in Appendix C. A total of 72 channels of data were recorded. Appendix B contains the vehicle, MDB and dummy response data traces.

The following table summarizes the results of the test.

Injury Criteria	Front SID H3	Rear SID H3
TTI (g)	42	70
PEV (g)	59	56

AIR BAG DEPLOYMENT STATUS

	DRIVER	FRONT PASSENGER	REAR PASSENGER
Front Air Bag	Yes	No	N/A
Knee Bolster Bag	N/A	N/A	N/A
Side Air Bag	N/A	N/A	N/A
Side Curtain Bag	N/A	N/A	N/A

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2003 Honda Element MPV
 Vehicle Body Color: Silver VIN: 5J6YH17213L006475
 Vehicle NHTSA No.: C35307 Month & Year of Manufacture: 3/03
 Engine Data: 4 Cylinders; CID: 2.4 Liters; - cc
 Engine Placement: - Longitudinal; or X Lateral
 Transmission: 5 Speed; X Manual; - Automatic; X Overdrive
 Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive
 Odometer Reading 60 km
 Supplemental Airbag Restraints:
 Front Occupant: X Frontal; - Knee; - Side; - Curtain
 Rear Occupant: X Frontal; - Knee; - Side; - Curtain

Options: - A/C; X Power Steering; X Power Brakes; X Power Windows

DATA FROM TIRE PLACARD

Recommended Tire Size: P215/70R16

*Recommended Cold Tire Pressure: 220 kPa FRONT; 235 kPa REAR

DATA FROM TIRE SIDEWALL:

Size of Tires on Test Vehicle: P215/70R16 99S; Manufacturer: Goodyear

Tire Pressure with Maximum Capacity Vehicle Load: Front: 300 kPa; Rear: 300 kPa

Treadwear: 340; Traction: A; Temperature: B

VEHICLE CAPACITY DATA:

Number of Occupants: 2 Front; 2 Rear; 0 3rd Seat; 4 Total
 Type of Front Seats: X Bucket; - Bench; - Split Bench;
 Type of Rear Seats: - Bucket; - Bench; X Split Bench; X Contoured
 Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Type of Rear Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Vehicle Max Capacity Loading = 306.16 kg (A)
 No. of Occupants x 68.04 kg = 272.16 kg (B)
 Vehicle Cargo Capacity = 34 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front = 420.5 kg Left Rear = 331.0 kg
 Right Front = 403.0 kg Right Rear = 330.5 kg
 TOTAL FRONT = 823.5 kg TOTAL REAR = 661.5 kg
 % of Total Weight = 55.5% % % of Total Weight = 44.5 %
 TOTAL WEIGHT = 1485.0 kg

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids	=	<u>1485.0</u>	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>34</u>	kg (B)
Weight of Instrumented SID H3 Dummies (2 X 81.2 kg)	=	<u>162.4</u>	kg (C)
TEST VEHICLE TARGET WEIGHT:	=	<u>1681.4</u>	kg (A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 2 SID H3s + CARGO):

Left Front	=	<u>463.5</u>	kg	Left Rear	=	<u>425.0</u>	kg
Right Front	=	<u>408.5</u>	kg	Right Rear	=	<u>384.0</u>	kg
TOTAL FRONT	=	<u>872.0</u>	kg	TOTAL REAR	=	<u>809.0</u>	kg
% of Total Weight	=	<u>51.9%</u>	%	% of Total Weight	=	<u>48.1%</u>	%
TOTAL TEST WEIGHT =		<u>1681.0</u>	kg				

AS TESTED WEIGHT OF TEST VEHICLE (2 SID H3s + CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	<u>453.0</u>	kg	Left Rear	=	<u>414.5</u>	kg
Right Front	=	<u>413.5</u>	kg	Right Rear	=	<u>394.0</u>	kg
TOTAL FRONT	=	<u>866.5</u>	kg	TOTAL REAR	=	<u>808.5</u>	kg
% of Total Weight	=	<u>51.7%</u>	%	% of Total Weight	=	<u>48.3%</u>	%
TOTAL TEST WEIGHT =		<u>1675</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front	<u>818</u>	Right Front	<u>815</u>	Left Rear	<u>826</u>	Right Rear	<u>825</u>
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FULLY LOADED:

Left Front	<u>802</u>	Right Front	<u>807</u>	Left Rear	<u>797</u>	Right Rear	<u>805</u>
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READY FOR TEST:

Left Front	<u>807</u>	Right Front	<u>811</u>	Left Rear	<u>797</u>	Right Rear	<u>802**</u>
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Test Vehicle Wheelbase. 2580 millimeters

C.G. = 1245.33 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4247 millimeters

Left Side = 4244 millimeters

Centerline = 4295 millimeters

** Lower than fully loaded attitude. Test was conducted with permission from COTR

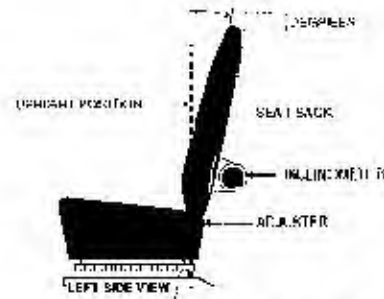
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.



FRONT SEAT ASSEMBLY

FRONT SEAT CUSHION PLACEMENT: Mid-position (14th detent or 140 mm)

Total Length of Adjustment Travel: 280 millimeters

Total Number of Adjustment Positions or Detents: 28

FRONT SEAT BACK ADJUSTMENT POSITION: 6th rearward notch

Seat Back Torso Angle: - degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: 2nd rearward notch

ADJUSTABLE STEERING COLUMN POSITION: Mid-position

WINDOW POSITIONS: Left Front: Closed Left Rear: Closed

Right Front: Open Right Rear: Removed

Note: Windows will be in closed position on struck side of test vehicle and in open position on opposite side.

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

64.7 liters (Fuel Tank Usable Capacity)

60.2 liters used for test (92%-94% of Fuel Tank Usable Capacity)

LOCATION OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase = 2580 millimeters

Impact Point is 350 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 343 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2003 Honda Element

Body Style: MPV

VIN: 5J6YH17213L006475

NHTSA No.: C35307

Test Date: May 6, 2003

Overall Length = 4295 millimeters Overall Width = 1760 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front = 453.0 kg Left Rear = 414.5 kg

Right Front = 413.5 kg Right Rear = 394.0 kg

TOTAL FRONT = 866.5 kg TOTAL REAR = 808.5 kg

TOTAL VEHICLE WEIGHT 1675.0 kg

Wheelbase = 2580 millimeters

Longitudinal C.G. from Center of Front Axle = 1245.33 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

Actual Impact Point is 7 mm Forward of nominal impact ref. line (Lateral)

Actual Impact Point is 10 mm Below nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (343 mm above ground) = 94 millimeters

2. LEVEL 2 (728 mm above ground) = 175 millimeters

3. LEVEL 3 (791 mm above ground) = 173 millimeters

4. LEVEL 4 (1097 mm above ground) = 85 millimeters

5. LEVEL 5 (1644 mm above ground) = 6 millimeters

Maximum Post-Test Intrusion = 175 millimeters

OCCUPANTS:

Front Passenger:

Rear Passenger:

Dummy Identification SID H3/015

SID H3/016

Restraints Used 3-point safety belt

3-point safety belt

INSTRUMENTATION:

Number of Vehicle Data Channels: = 21

Number of Cameras: Onboard = 3

Offboard = 6

TOTAL = 9

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore, Inc. 028C0103-2 023B1102

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27" to left

MDB DETAILS:

Overall Width of Framework Carriage	=	<u>1250</u>	millimeters
Overall Length of MDB (incl. honeycomb impact face)	=	<u>4120</u>	millimeters
Wheelbase of Framework Carriage	=	<u>2590</u>	millimeters
Tread of Framework Carriage (Front & Rear)	=	<u>1875</u>	millimeters
C.C. Location Rearward of Front Axle	=	<u>1104</u>	millimeters

MDB WEIGHT:

Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>281.5</u>	kg
Right Front	=	<u>372.5</u>	kg	Right Rear	=	<u>299.0</u>	kg
TOTAL FRONT =		<u>782.0</u>	kg	TOTAL REAR =		<u>580.5</u>	kg
TOTAL MDB WEIGHT =		<u>1362.5</u>	kg				
Impact Angle (MDB C/L to Target Vehicle C/L)	=	<u>90</u>	degrees				
Impact Speed	=	<u>61.48</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>177</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>138</u>	millimeters
3. Row C at Mid Level	=	<u>126</u>	millimeters
4. Row D at Top of Stack Level	=	<u>149</u>	millimeters

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET 4

POST-TEST OBSERVATIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

TEST DUMMY INFORMATION AND CONTACT POINTS:

DESCRIPTION	FRONT SEAT	REAR SEAT
ATD Type/Serial No.	SID 113/015	SID H3/016
Head Contact:	The back of the head to the head restraint	The top of the head to the side header
Upper Torso Contact:	Door Trim Panel	"C" Pillar
Lower Torso Contact:	Door Trim Panel	"C" Pillar
Left Knee Contact:	Door Trim Panel	Door Trim Panel
Right Knee Contact:	Left Knee	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

DESCRIPTION	FRONT	REAR
Left Side Doors	Closed, Latched and Inoperable	Closed, Latched and Inoperable
Right Side Doors	Closed, Latched and Operable without Tools	Closed, Latched and Operable without Tools
Hatch/Other Door	N/A	Closed, Latched and Operable without Tools
Seat Movement (mm)	0	0
Seat Back Failure	None	None

POST TEST STRUCTURAL OBSERVATIONS

CRITICAL AREAS OF PERFORMANCE	
Pillar Performance	A- and "C"-pillars were moved inboard with no visible tears or separations.
Sill Separation	No visible tears or separations
Windshield Damage	None
Window Damage	Rear left side window shattered during the event.
Other Notable Effects	None

AIR BAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
Front Air Bag	Yes	No	N/A
Knee Bolster Bag	N/A	N/A	N/A
Side Air Bag	N/A	N/A	N/A
Side Curtain Bag	N/A	N/A	N/A

MDB LEFT EDGE IMPACT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	± 50 mm	7 mm forward
Vertical Offset	mm	± 20 mm	10 mm below

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID II3 INSTRUMENTATION DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

		Front Dummy ID# 015				Rear Dummy ID# 016			
		Pos. Direction		Neg. Direction		Pos. Direction		Neg. Direction	
		Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
HEAD ACCELERATIONS:									
NAAH X Arm	Y	46.4	84.6	-4.8	46.6	116.6	67.4	-13.0	82.6
NAAH X Arm	Z	39.2	64.4	-2.6	99.4	14.0	63.3	-45.0	72.5
NAAH Y Arm	X	1.3	199.9	-26.7	84.4	16.3	77.4	-41.1	64.0
NAAH Y Arm	Z	33.6	56.8	-6.9	84.8	31.2	63.1	-60.7	64.8
NAAH Z Arm	X	2.8	54.6	-39.8	83.9	26.1	76.2	-34.8	65.7
NAAH Z Arm	Y	90.0	84.2	-20.0	54.8	215.7	63.7	-52.4	74.4
Longitudinal	X	1.3	44.3	-19.9	84.4	8.4	73.5	-16.1	65.9
Lateral	Y	53.1	84.6	-2.8	44.0	141.7	66.1	-13.0	81.4
Vertical	Z	32.8	69.2	-1.8	36.8	22.1	66.0	-52.4	78.4
Resultant	R	60.3	84.4	0.0	-15.3	143.8	66.1	0.0	-2.8
HIC		200.3				10-3.1			
NECK FORCES:									
Longitudinal	X	40.3	44.9	-585.6	87.0	1211.3	78.6	-103.6	147.7
Lateral	Y	605.4	85.9	-98.6	40.9	661.9	69.2	-1711.0	78.5
Vertical	Z	1337.0	69.3	-525.7	85.4	659.4	57.5	1794.5	77.4
Resultant	R	1444.9	69.3	0.1	-13.9	2709.9	78.1	0.1	-3.1
NECK MOMENTS:									
X		39.9	83.4	-40.4	55.4	17.2	137.5	-230.7	70.3
Y		†	†	†	†	21.7	81.2	28.2	73.9
Z		§	§	§	§	6.3	127.2	-24.6	72.1
Resultant	R	§	§	§	§	232.9	70.4	0.0	2.9
RIB ACCELERATIONS:									
Upper Rib Lateral	Y	36.7	57.5	-3.9	76.3	83.3	58.2	-23.1	65.0
Upper Rib Lateral	Y(R)	35.8	57.5	-4.7	76.8	81.5	58.7	-21.5	65.0
Lower Rib Lateral	Y	34.0	43.8	-3.2	73.1	87.0	58.1	-11.6	85.0
Lower Rib Lateral	Y(R)	34.0	43.8	-3.0	73.2	90.3	58.1	-12.1	85.6
SPINE ACCELERATIONS:									
Lower Lateral	Y	47.8	46.3	-3.3	95.0	52.6	62.5	-33.5	81.3
Lower Lateral	Y(R)	46.8	46.3	-3.4	95.0	53.0	62.5	-33.1	81.3
PELVIC ACCELERATIONS:									
Lateral	Y	59.4	40.6	-12.4	60.0	55.8	45.0	-14.5	68.1
Lateral	Y(R)	60.4	40.7	-12.5	60.0	54.5	45.0	-14.1	68.1

REFERENCE: Positive Direction: Longitudinal (X) = forward; Lateral (Y) = to right; Vertical (Z) = down

Note: Rib, Spine and Pelvis data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.

Head Accelerations and Neck Forces are filtered at SAE Class 1000, Neck Moments are filtered at SAE Class 600.

† Channel Opened

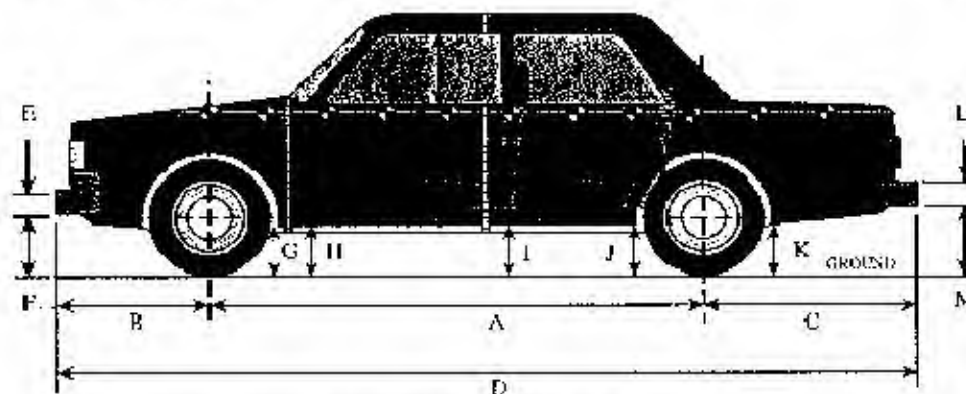
§ Data is Questionable

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: all dimensions are in millimeters with tolerance of ± 3 mm

	PRE-TEST (as delivered)	PRE-TEST (as tested)	POST-TEST (as tested)	Δ CHANGE
A	2575	2580	2555	-25
B	819	-	870	1
C	901	-	917	16
D	4295	-	4292	-3
E	158	-	158	0
F	312	309	330	21
G	297	282	286	4
H	297	282	281	-1
I	307	286	278	-8
J1	297	272	273	1
J2	307	282	296	14
K	350	326	329	3
L	135	-	135	0
M	390	366	365	-1
N	760	-	744	-16
O	707	-	706	-1
P	1007	-	958	-49
Q	448	-	441	-7
R	4247	-	4251	4
S	4244	-	4243	-1
T	1760	-	1652	-108

D = Length at Centerline

E&L = Bumper Thickness

R = Right Side Length

S = Left Side Length

T = Width at B-Pillar

J1 = To Pinch Weld

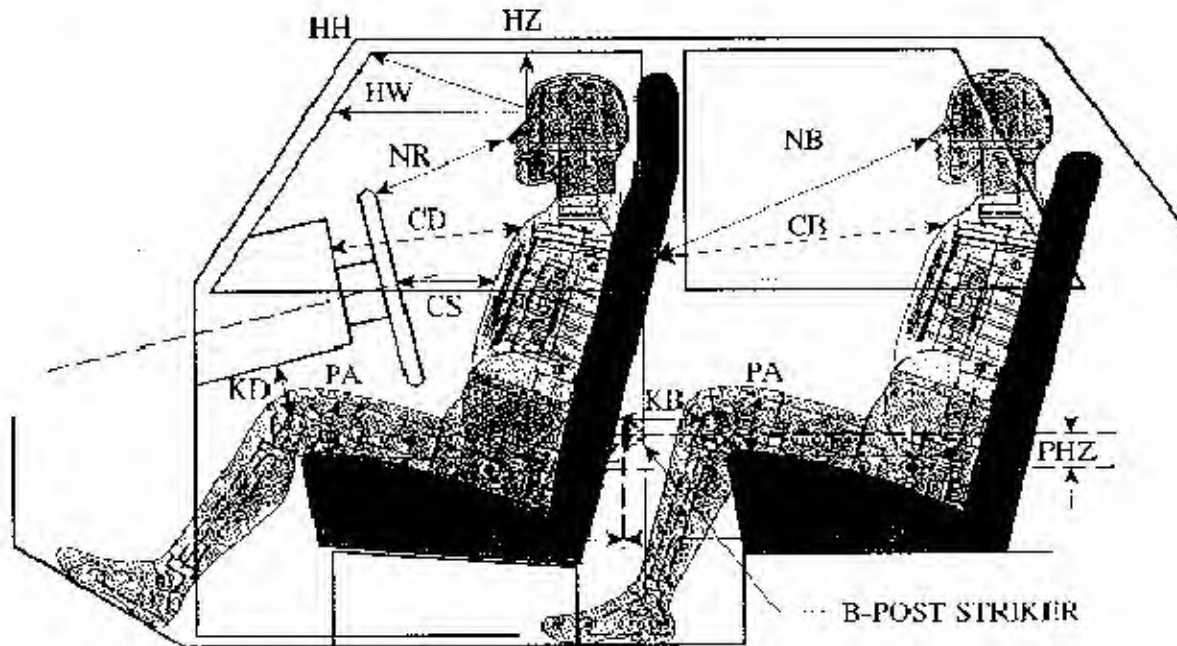
J2 = To Sill

DATA SHEET 7

SID H3 LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: 2-DOOR VEHICLE SHOWN.
REAR DUMMY PHX & PHZ
MEASUREMENTS FOR A 4-DOOR
VEHICLE WOULD USE THE C-POST
STRIKER AS A REFERENCE POINT

NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID#015	LEFT REAR PASS. ID#016
HH	725	N/A
HW	895	N/A
HZ	250	164
NR/NB	493	855
CD/CB	614	755
CS	280	N/A
KDL(KDA°)/KBL(KBA°)	115 / (35 °)	381 / (22 °)
KDR(KDA°)/KBR(KBA°)	121 / (38 °)	390 / (28 °)
PA°	23.4 °	24.4 °
PHX	256	785
PHZ	153	371

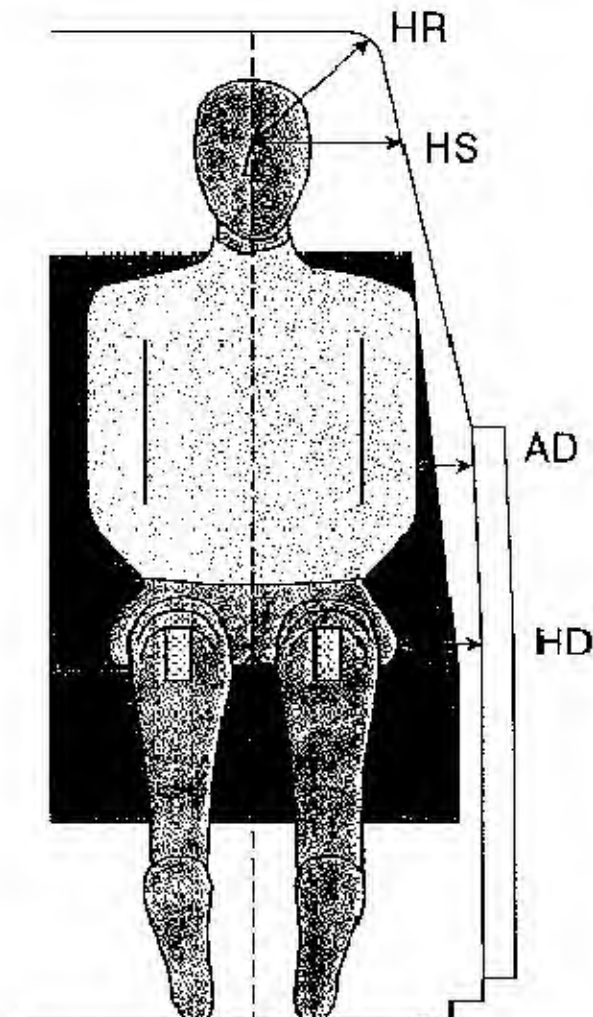
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID H3 LATERAL CLEARANCE DIMENSIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. 335307



NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID # 015		LEFT REAR PASS. ID # 016	
HR	272		295	
HS	330		440	
AD*	LOWER: 115	UPPER: 97	LOWER: 131	UPPER: 258
HD	196		133	

* Lower measurement is taken laterally at the center of the lower rib accelerometer height from the SID H3 arm segment to the closest part of the vehicle side.

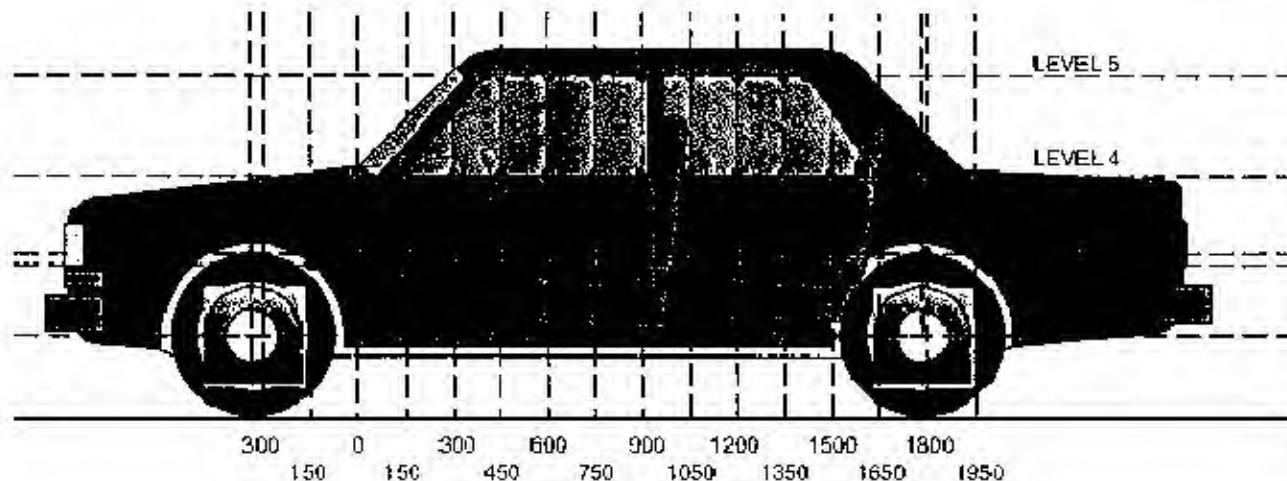
Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID H3 arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: All measurements are in millimeters (mm)

LEVEL 5 - WINDOW TOP

LEVEL 4 - WINDOW SILL

LEVEL 3 - MID-DOOR

LEVEL 2 - OCCUPANT H-POINT

LEVEL 1 - AXLE CENTERLINE HEIGHT OR SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED" CONFIGURATION.

Measurements Along the Vertical 750 mm Line Shown Above.

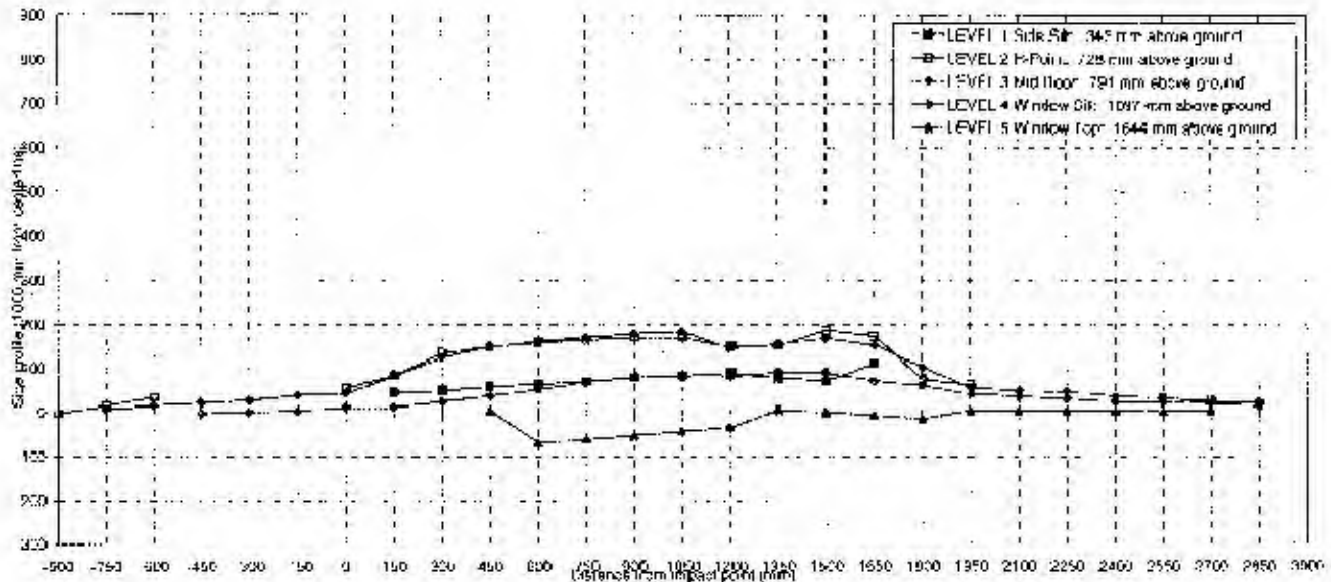
Level 5 @ Window Top	=	1644	millimeters
Level 4 @ Window Sill	=	1097	millimeters
Level 3 @ Mid Door	=	791	millimeters
Level 2 @ Occupant H-Point	=	728	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	343	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: All dimensions are in millimeters, with a tolerance of ±1 mm

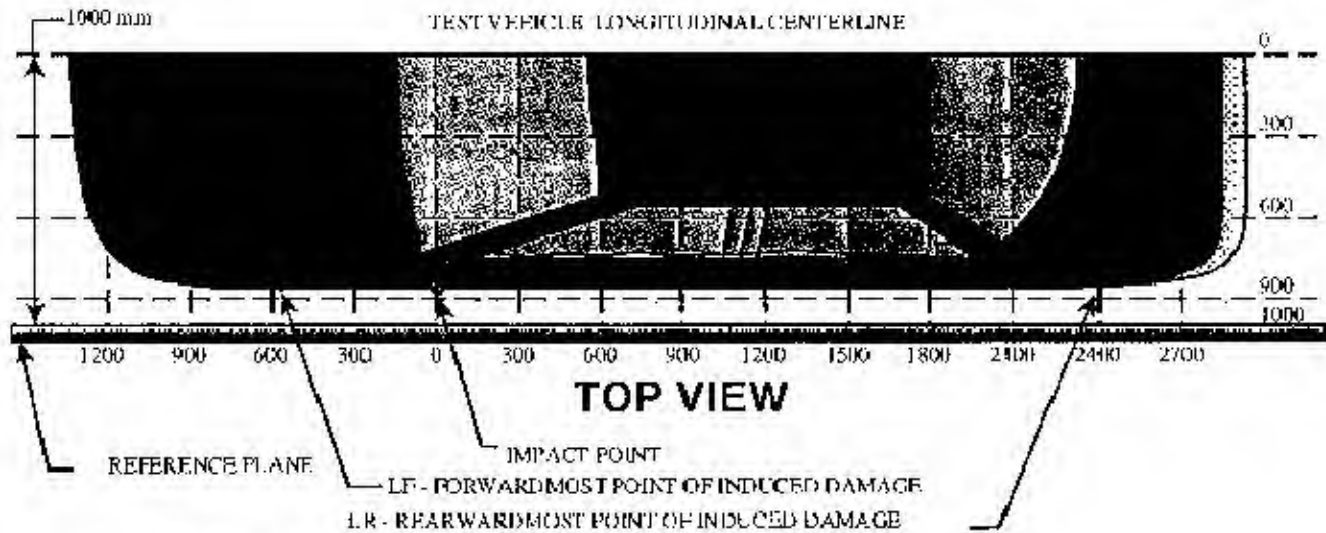
		DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																														
LEVEL	HEIGHT (mm)		500	750	670	450	300	150		150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000			
LEVEL 1 SIDE SILL	345	PRL	-	-	-	-	-	-		185	201	200	200	199	195	197	198	199	204	197	-	-	-	-	-	-	-	-	-	-		
		POST	-	-	-	-	-	-	-	216	239	244	249	254	260	264	270	261	259	255	-	-	-	-	-	-	-	-	-	-		
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	-	31	37	44	50	55	51	57	74	62	55	94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
LEVEL 2 B-POST	725	PRL	237	200	177	-	-	-		155	152	150	148	148	146	145	146	148	152	156	159	-	-	-	-	151	171	199	-	-		
		POST	241	201	154	-	-	-	-	229	216	287	298	302	305	300	282	287	323	314	312	154	-	-	-	191	187	285	-	-		
		CRUSH	31	7	35	N/A	N/A	N/A	-	74	124	137	148	144	159	158	137	141	125	183	62	49	N/A	N/A	N/A	12	31	6	N/A			
LEVEL 3 MID FLOOR	791	PRL	-	198	148	123	120	121		151	145	147	146	143	144	143	141	147	146	148	148	137	119	134	120	122	171	198	-	-		
		POST	-	178	159	137	139	150	-	227	264	286	299	306	313	310	276	288	304	290	241	177	156	148	141	172	181	208	-	-		
		CRUSH	N/A	11	8	14	18	19	-	32	115	139	153	162	169	173	135	146	156	142	92	44	92	94	44	29	8	10	N/A			
LEVEL 4 WINDOW SILL	1087	PRL	-	-	-	257	219	207		197	181	177	172	170	167	165	166	167	168	169	171	173	177	187	182	195	229	253	-	-		
		POST	-	-	-	251	215	206	-	191	180	188	181	173	161	156	140	152	150	144	124	126	205	203	205	211	219	238	-	-		
		CRUSH	N/A	N/A	N/A	6	14	11	-	6	18	31	46	42	75	71	74	52	82	64	53	23	28	21	16	15	10	5	N/A			
LEVEL 5 WINDOW TOP	1644	PRL	-	-	-	-	-	-		-	-	249	322	325	321	317	312	310	308	310	312	314	320	327	332	337	349	-	-			
		POST	-	-	-	-	-	-	-	-	-	354	283	264	260	274	279	316	308	309	297	315	313	322	326	332	351	-	-			
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	62	61	52	42	35	6	3	17	15	4	2	2	1	0	2	N/A	N/A			

DATA SHEET II

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: All dimensions are in millimeters with tolerance of ± 3 mm.

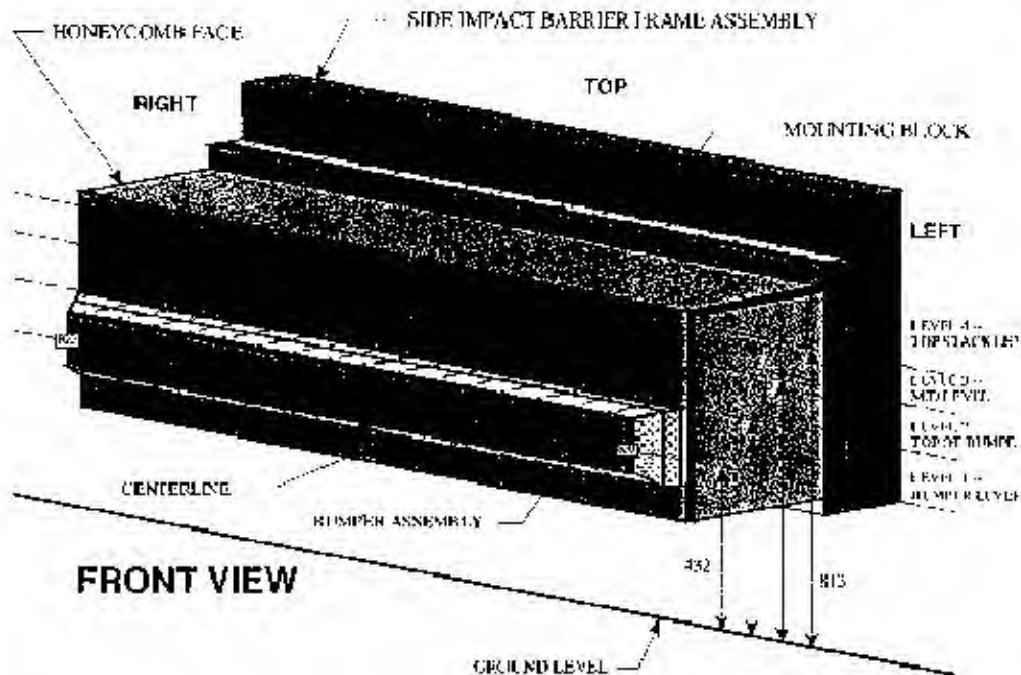
DPD MEASUREMENTS		POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1	(LR = -860 mm)	236	235	1
2	-148	157	121	36
3	564	304	146	158
4	1276	291	142	149
5	1988	182	129	53
6	(LF = 2700 mm)	195	172	23

DATA SHEET 12

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: Dimensions are shown in millimeters.

NOTE: All dimensions are in millimeters with a tolerance of ± 2 mm.

LEVEL	HEIGHT AT CL (mm)		DISTANCE RIGHT OF CENTER (mm)								DISTANCE LEFT OF CENTER (mm)							
			900	700	600	500	400	300	200	100	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	813	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	727	711	697	688	727	731	674	655	658	660	670	684	692	716	739	758
		CRUSH	118	92	73	69	108	102	55	36	39	41	51	57	74	97	120	149
LEVEL 2 MID LEVEL	646	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	741	677	668	680	711	704	674	662	646	646	649	657	670	684	706	745
		CRUSH	122	58	49	61	91	85	55	43	27	27	30	38	51	65	87	126
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	757	754	748	745	738	741	735	738	734	736	734	735	734	735	738	738
		CRUSH	138	135	129	126	119	122	116	119	115	117	115	116	115	116	119	119
LEVEL 1 BUMPER	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	519	535
		POST	711	696	692	691	694	691	680	690	677	679	676	674	673	674	677	690
		CRUSH	176	173	174	173	176	174	163	162	159	161	158	156	155	156	158	152

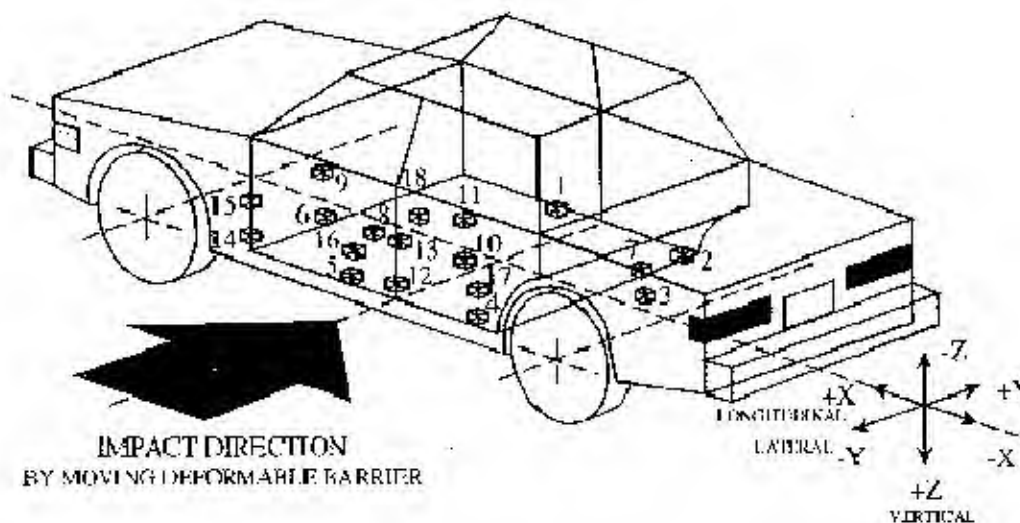
*1 heights measured above ground level.

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



- 1-Right Side Sill @ Front Seat
- 2-Right Side Sill @ Rear Seat
- 3-Rear Floorpan Above Axle
- 4-Left Side Sill @ Rear Seat
- 5-Left Side Sill @ Front Seat
- 6-Left Front Door on Centerline
- 7-Right Rear Occupant Compartment
- 8-Midrear of Left Front Door
- 9-Left Front Door Upper Centerline

- 10-Midrear of Left Rear Door
- 11-Left Rear Door Upper Centerline
- 12-Left Lower B-Pillar
- 13-Left Middle B-Pillar
- 14-Left Lower A-Pillar
- 15-Left Middle A-Pillar
- 16-Front Seat Track
- 17-Rear Seat Track
- 18-Vehicle CG

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

NHTSA No. C35307

Vehicle: 2003 Honda Element MPV

Accel. No.	Location	Coordinates (mm)±3 mm			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
1	Right Side Sill at Front Seat	2797	656	-380	pos. 2.8 neg. -10.6	50.9 8.5	42.2 -3.4	7.1 66.0	5.1 -11.5	131.7 7.2	44.6 0.0	7.2 -16.8
2	Right Side Sill at Rear Seat	1682	587	-533	pos. 3.3 neg. -7.5	51.1 7.8	44.4 -3.0	7.1 70.9	5.8 8.5	77.3 16.2	45.2 0.0	7.1 -20.0
3	Rear Floorpan Above Axle	998	20	-534	pos. 2.5 neg. -6.5	51.8 10.8	40.5 -2.8	8.2 109.8	4.3 -5.8	70.3 53.1	40.8 0.0	8.3 -20.0
4	Left Side Sill at Rear Seat	1597	-520	-514	pos. - neg. -	- -	45.8 -46.3	4.1 7.7	- -	- -	- -	- -
5	Left Side Sill at Front Seat	2714	-558	-367	pos. - neg. -	- -	§ §	§ §	- -	- -	- -	- -
6	Left Front Door on Centerline	-	-	-	pos. - neg. -	- -	** +	** **	- -	- -	- -	- -
7	Right Rear Occupant Compartment	1704	353	-532	pos. - neg. -	- -	40.3 -3.3	7.6 109.2	- -	- -	- -	- -
8	Midrear of Left Front Door	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
9	Left Front Door Upper Centerline	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
10	Midrear of Left Rear Door	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
11	Left Rear Door Upper Centerline	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -

*Reference: X - Rear Bumper (+ Forward)

** Accelerometer was not requested by COTR.

Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

§ - Not Accurate after 82 ms

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

Accel. No.	Location	Coordinates (mm)±3 mm			Long. (X)		Lat. (Y)		Vert. (Z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
12	Left Lower B-Pillar	1953	-674	-526	-	-	222.3	3.0	-	-	-	-
					-	-	-86.2	6.7	-	-	-	-
13	Left Middle B-Pillar	1917	-654	-1204	pos.	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-
14	Left Lower A-Pillar	2969	-595	-453	pos.	-	147.1	7.5	-	-	-	-
					-	-	-71.3	26.2	-	-	-	-
15	Left Middle A-Pillar	2926	-647	-1149	pos.	-	36.4	9.1	-	-	-	-
					-	-	-8.9	4.4	-	-	-	-
16	Front Seat Track	2086	-551	-463	pos.	-	63.4	5.0	-	-	-	-
					-	-	-11.4	9.1	-	-	-	-
17	Rear Seat Track	1389	-493	-526	pos.	-	133.3	6.0	-	-	-	-
					-	-	-33.2	21.2	-	-	-	-
18	Vehicle CG	2589	132	-380	pos.	51.1	49.4	9.5	12.7	19.9	51.3	9.3
					-10.6	8.4	-3.5	75.2	-14.5	8.0	0.0	-19.6

*Reference: X - Rear Humper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

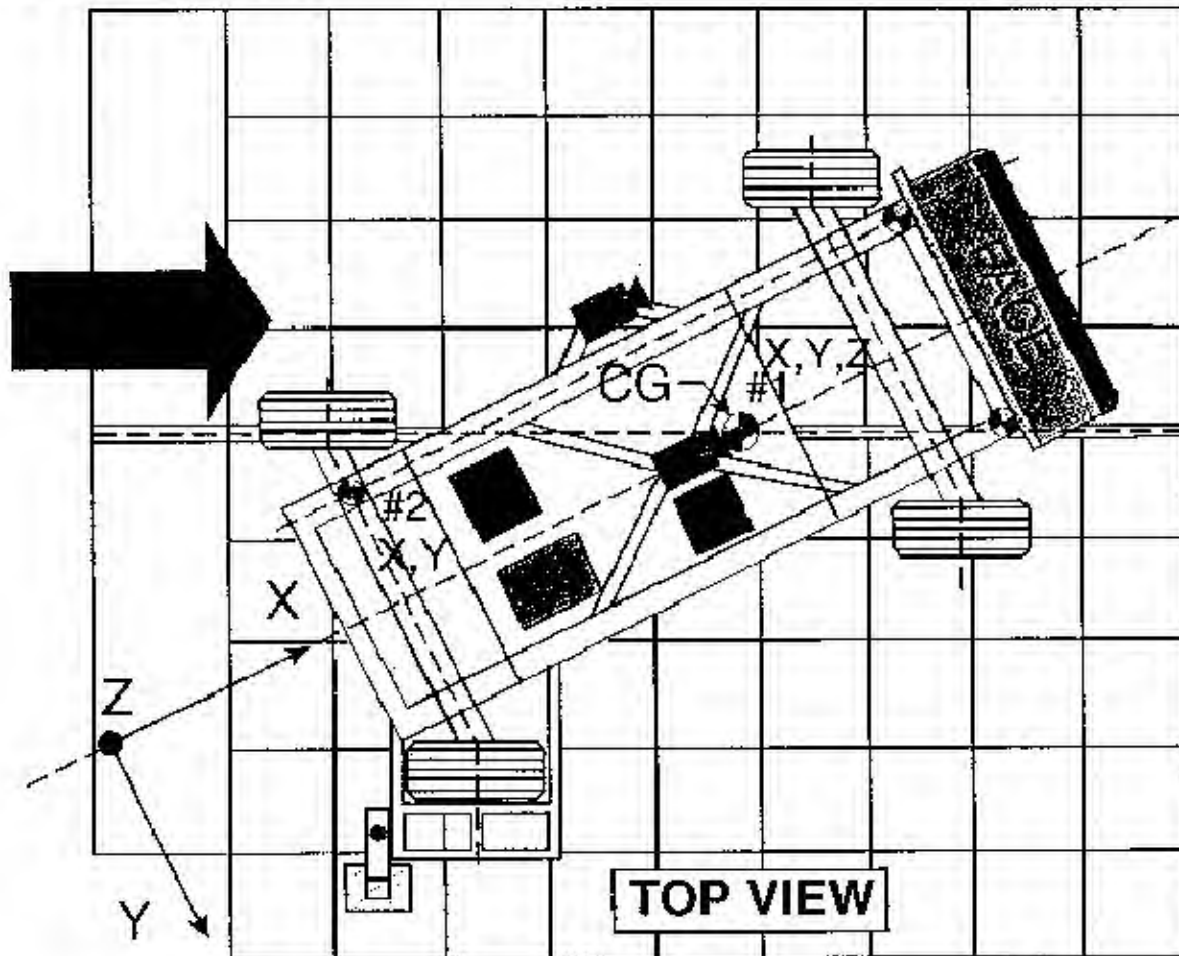
† - Not accurate after 23 ms.

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	-330	1.0	91.7	-21.7	35.1
	Lateral..... Y				2.9	55.1	-7.0	31.2
	Vertical..... Z				18.4	52.4	-17.9	58.6
	Resultant..... R				26.7	40.3	0.1	179.3
2	Rear Frame Member							
	Longitudinal... X	386	-660	-660	1.3	87.7	-24.6	28.9
	Lateral..... Y				3.6	18.8	-2.5	57.9

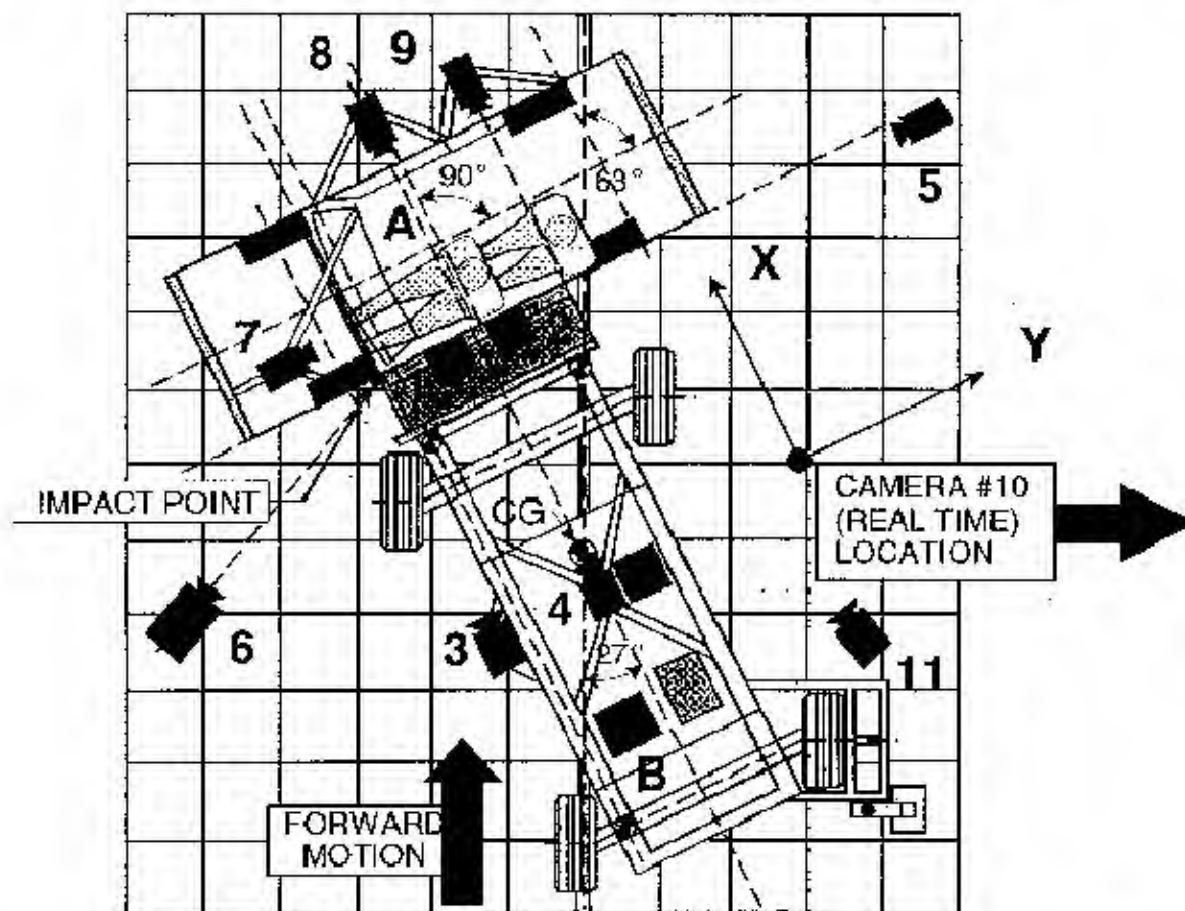
*Reference: X = Rear Bumper (+ Forward)
Y = Vehicle Centerline (+ To Right)
Z = Ground Level (+ Down)
All measurements accurate to within +3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NJITSA No. C35307



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	329	902	-4880	-90	8	1000
2	Overhead closeup view of impact plane	88	740	-4880	-90	12.5	1000
3	MDB onboard closeup view of impact point	-1470	0	-847	0	13	1010
4	MDB onboard view of driver dummy	-1140	838	-1586	-17	7.5	1000
5	Right side ground level overall view	-65	9325	-1088	-2	25	1000
6	Left side ground level overall view	-2310	-1567	-1069	-4	13	1000
7	Test vehicle onboard driver front view	495	-38	-1434	-10	13	800
8	Test vehicle onboard driver side view	1670	803	-1255	-5	8	1000
9	Test vehicle onboard passenger side view	1775	1595	-1295	-8	8	900
10	Real time film coverage of test	-	-	-	-	-	24

* Reference (from point of impact); all measurements accurate to within ± 6 mm.

X = (Impact Point) + Forward

Y = (Impact Point) + To Right

Z = (Ground Level) + Down

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

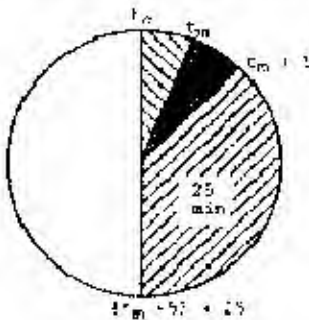
FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: C35307 TEST DATE: May 6, 2003
 Vehicle Mfg./Make/Model: Honda of America Mfg., Inc. 2003 Honda Element MPV

TEST VEHICLE IMPACT TYPE:

- Frontal (48.28 kph)
- Oblique (48.28 kph) with - "barrier face first
 contacting the - side
 (driver/passenger)
- Rear Moving Barrier (48.28 kph)
- Lateral Moving Barrier (32.19 kph)
- X Side Impact Moving Deformable Barrier (62.0 kph)
 contacting the driver side side
 (driver/passenger)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
0 g	28 g
0 g	142 g
0 g	28 g/1 min.

SOLVENT SPILLAGE DETAILS:

None

DATA SHEET 17

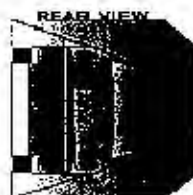
ROLLOVER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No.: C35307



90



180



REAR VIEW



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1-3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	11	seconds	5	minutes	6	minutes	11	seconds	7	minutes
90° - 180°	1	minutes	03	seconds	5	minutes	6	minutes	3	seconds	7	minutes
180° - 270°	1	minutes	00	seconds	5	minutes	6	minutes	0	seconds	7	minutes
270° - 360°	1	minutes	10	seconds	5	minutes	6	minutes	10	seconds	7	minutes

II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180° - 270°	0	0	0	N/A
270° - 360°	0	0	0	N/A

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover Stage	Spillage Location
0° - 90°	None
90° - 180°	None
180° - 270°	None
270° - 360°	None

APPENDIX A
PHOTOGRAPHS

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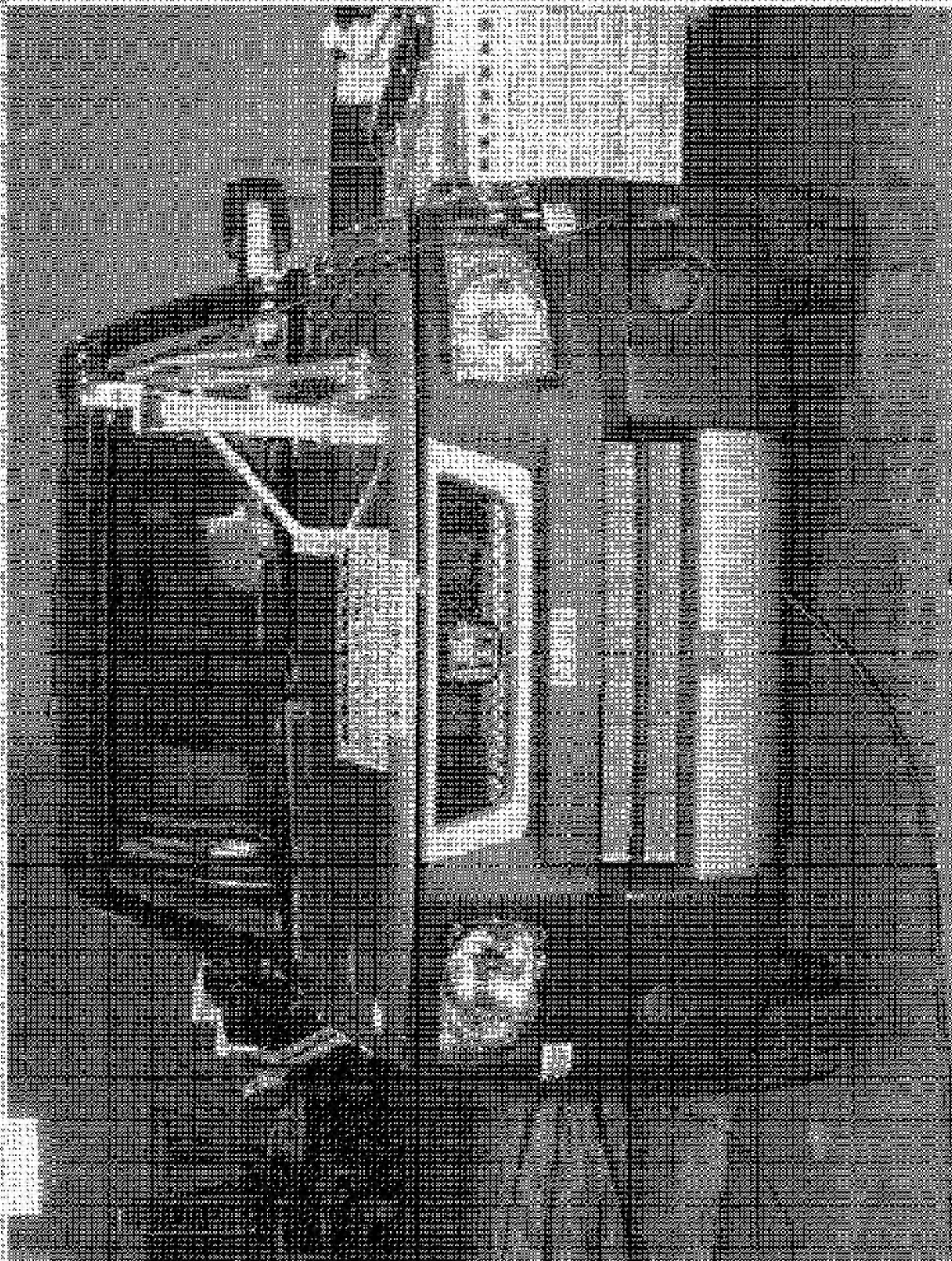


FIGURE 1 - PRE-TEST FRONTAL VIEW OF TEST OBJECT

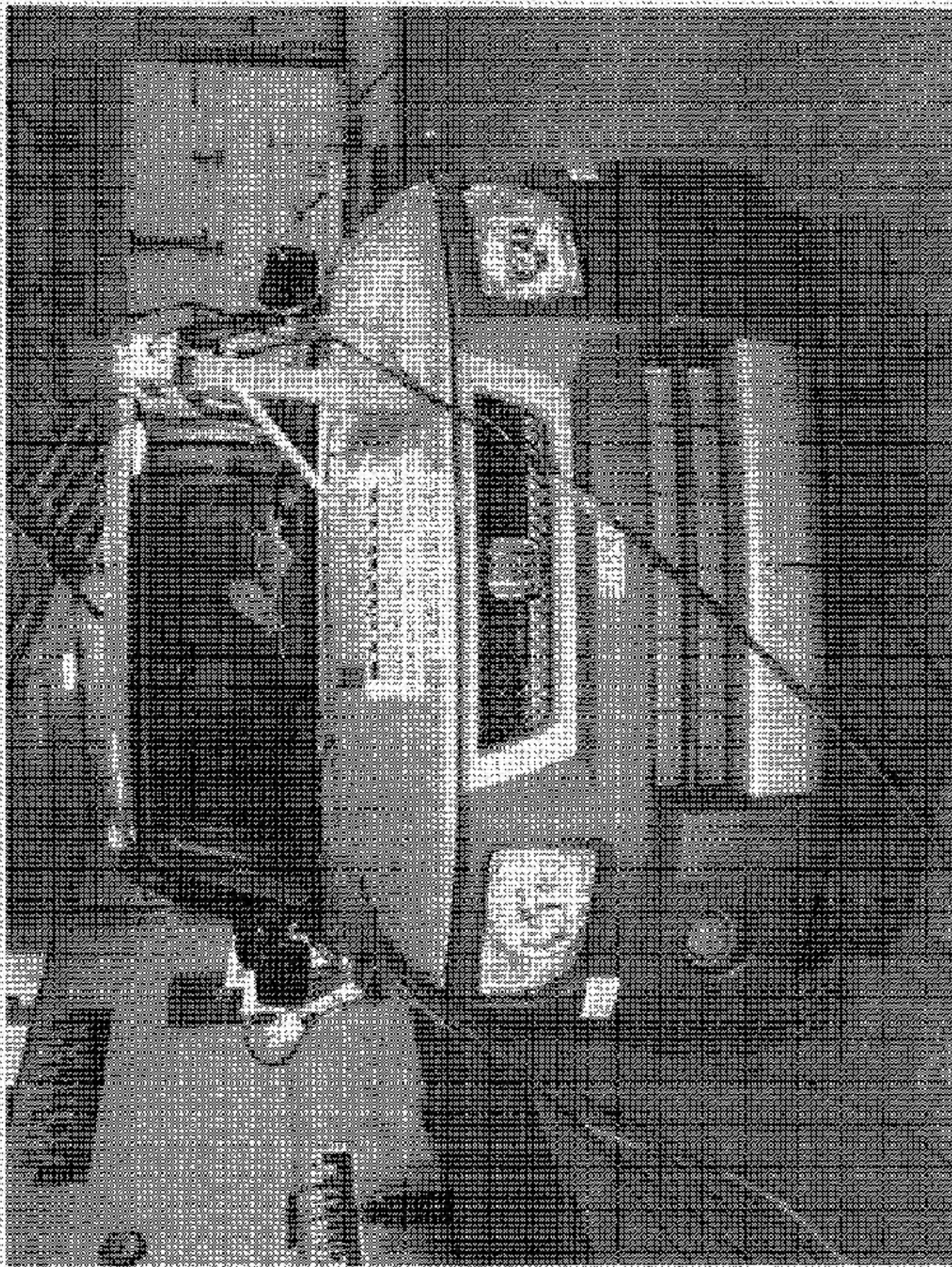
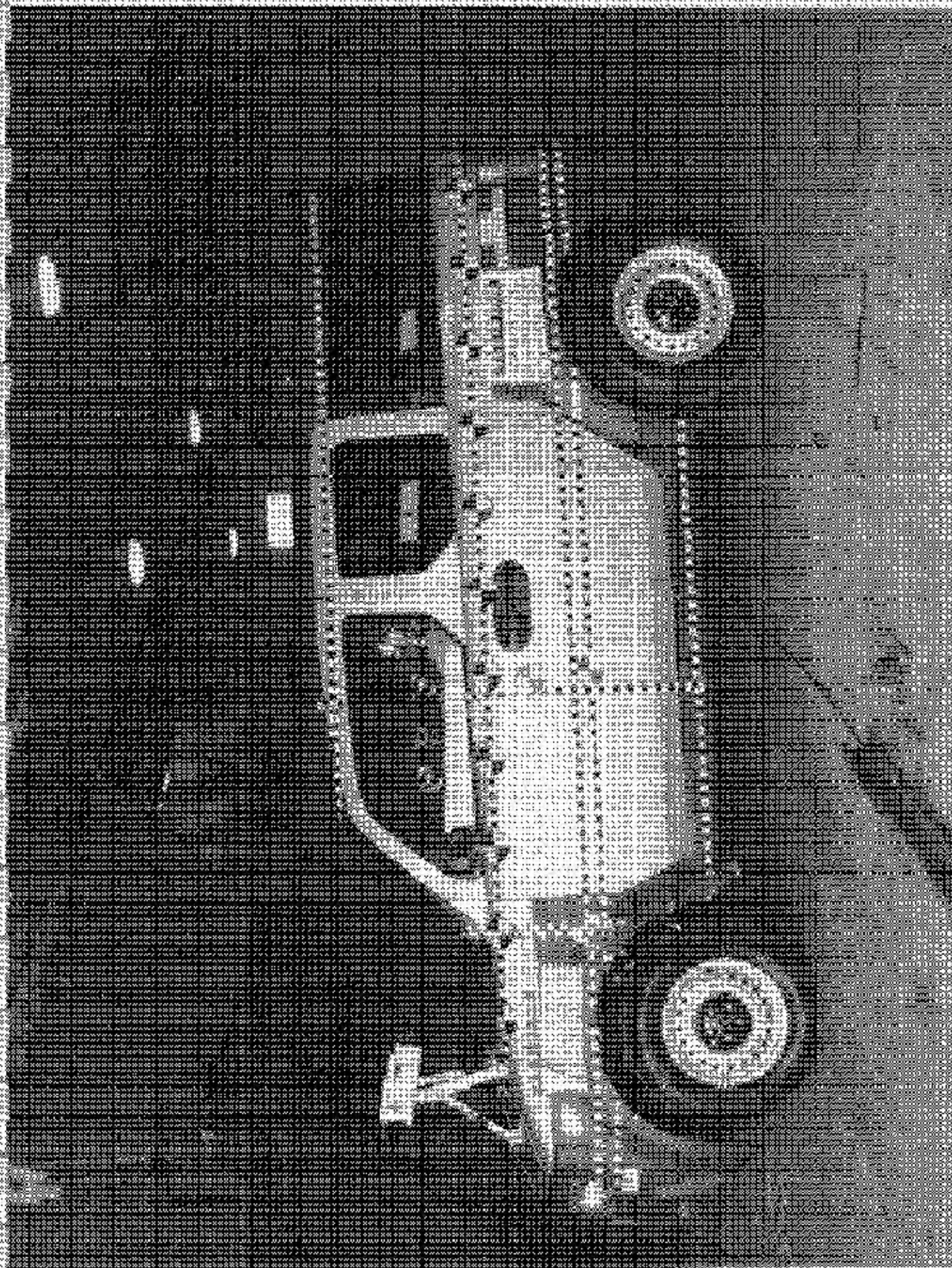


Figure A-2 POST-TEST FRONTAL VIEW OF TEST VEHICLE



FIGURE 1. FRONT VIEW OF TEST VEHICLE



14-00000-5 PUBLISHED BY THE U.S. GOVERNMENT PRINTING OFFICE: 1965 O-349-578

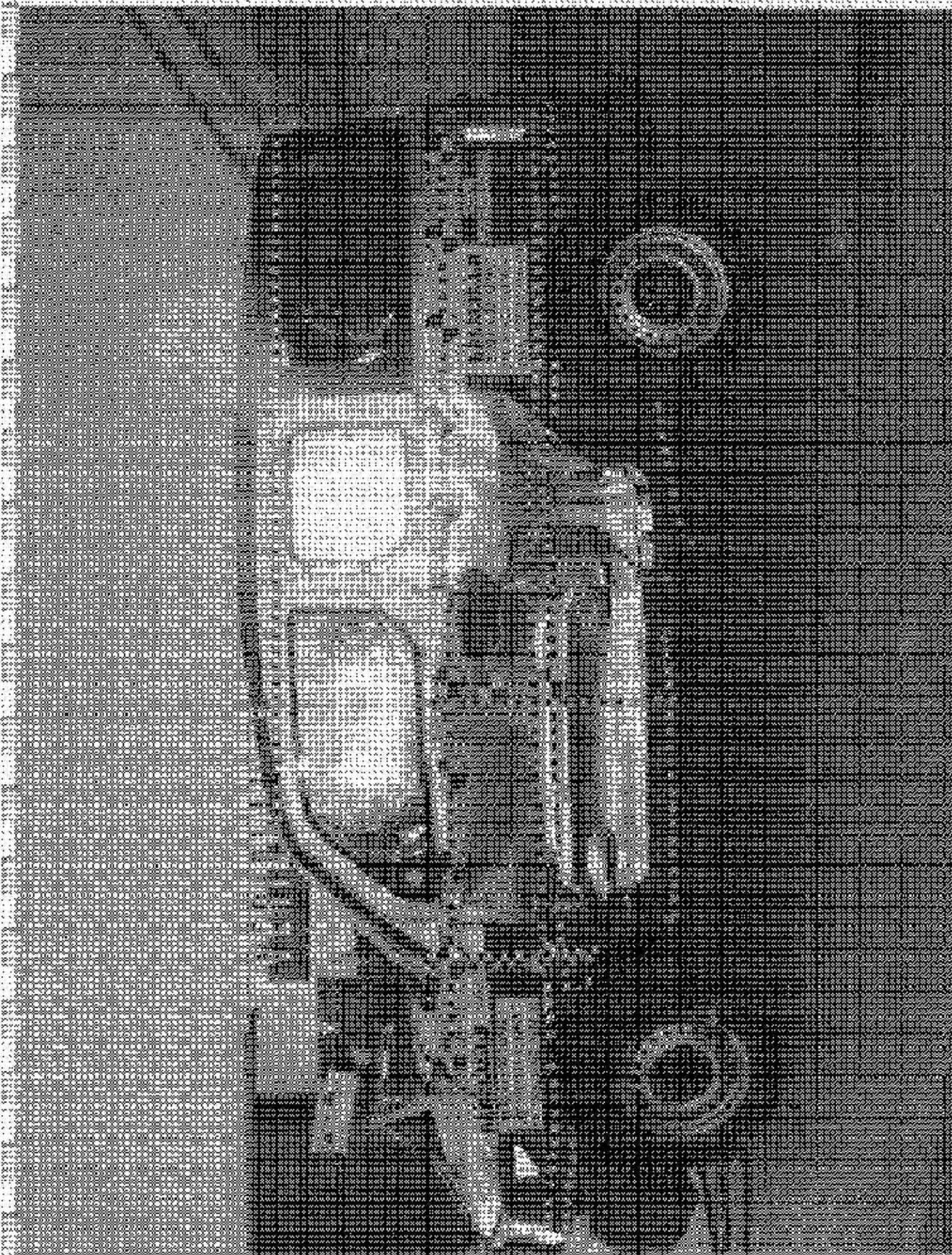


FIGURE 4-6. PUMP TEST RIG WITH THE SIDE VIEW OF THE PUMP.

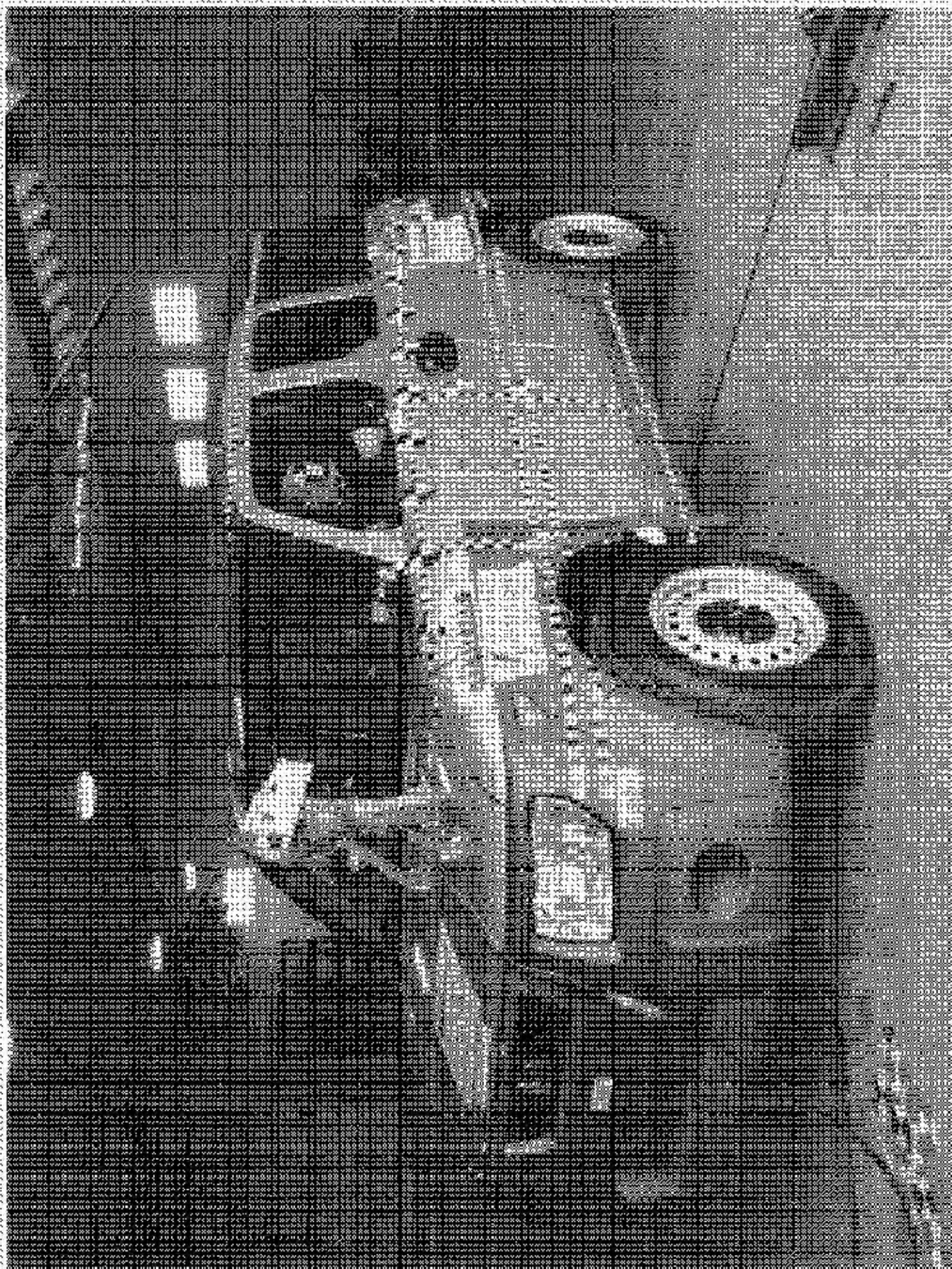


Figure 1.7.2. PRE-TEST PRINTING OF TEST VEHICLE

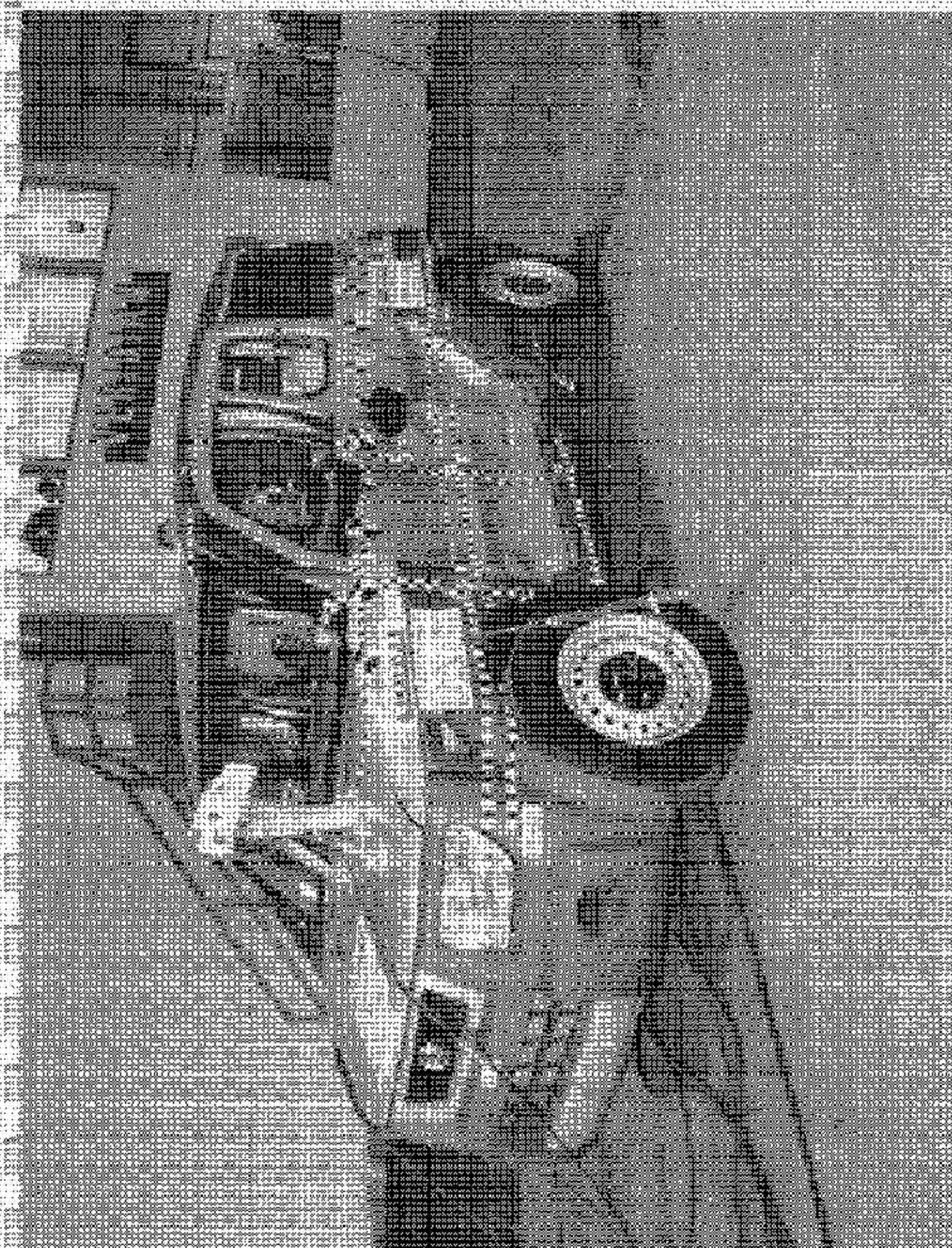


Figure 4. SPOT-11 SLEET FRONT VIEW OF TEST VEHICLE

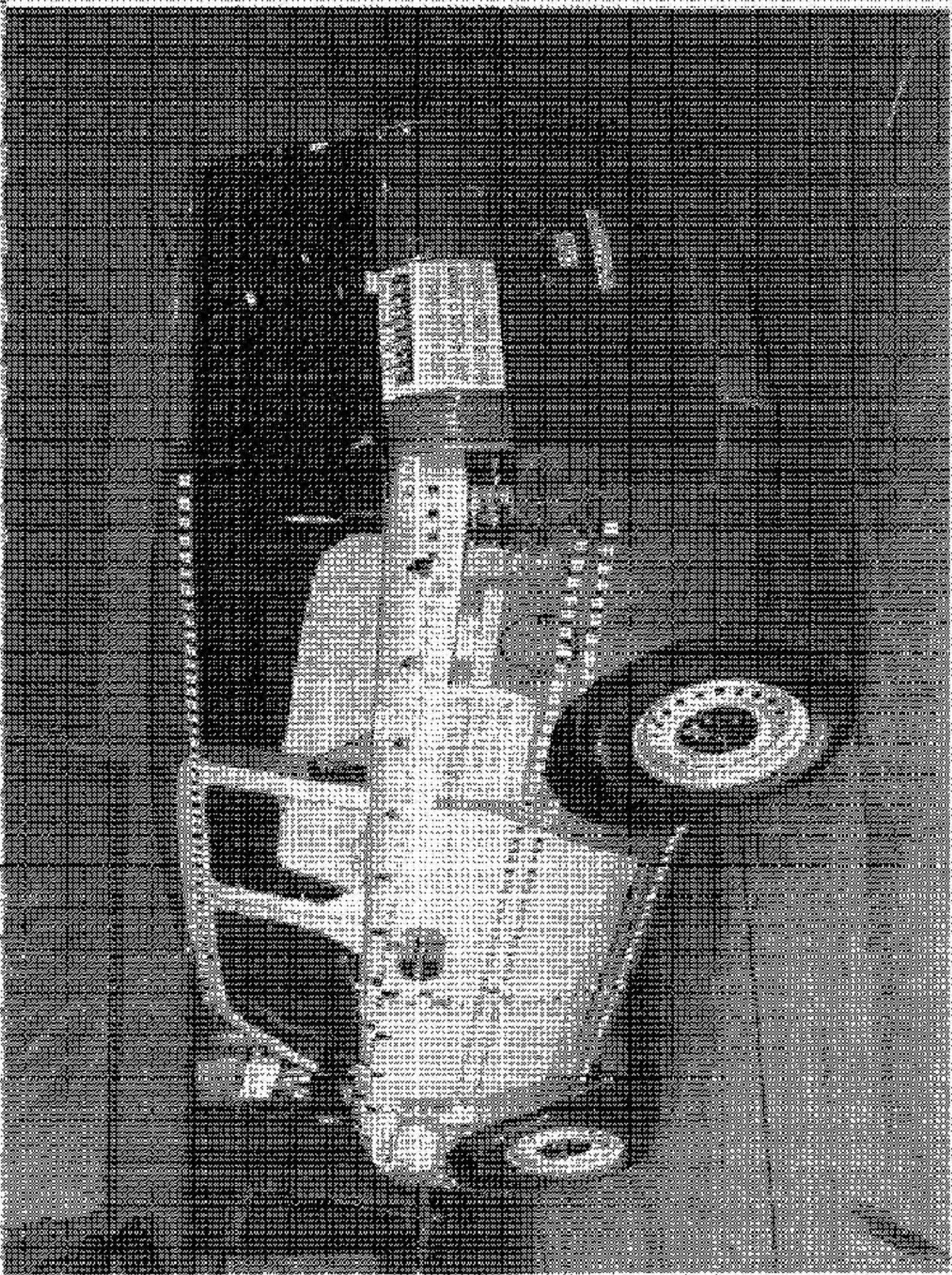
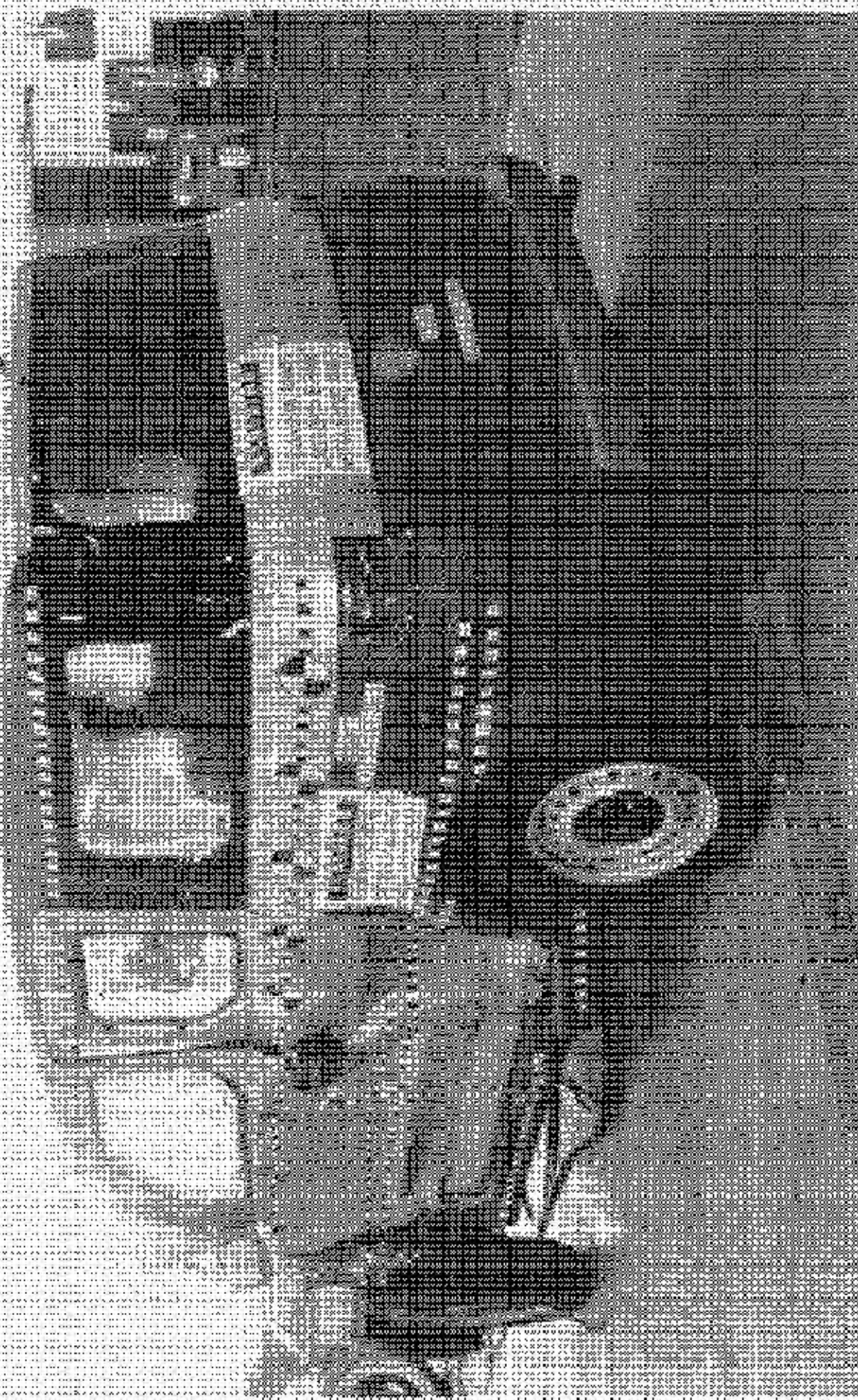


FIGURE 1. A-5000 TEST LEFT REAR VIEW OF TEST VEHICLE



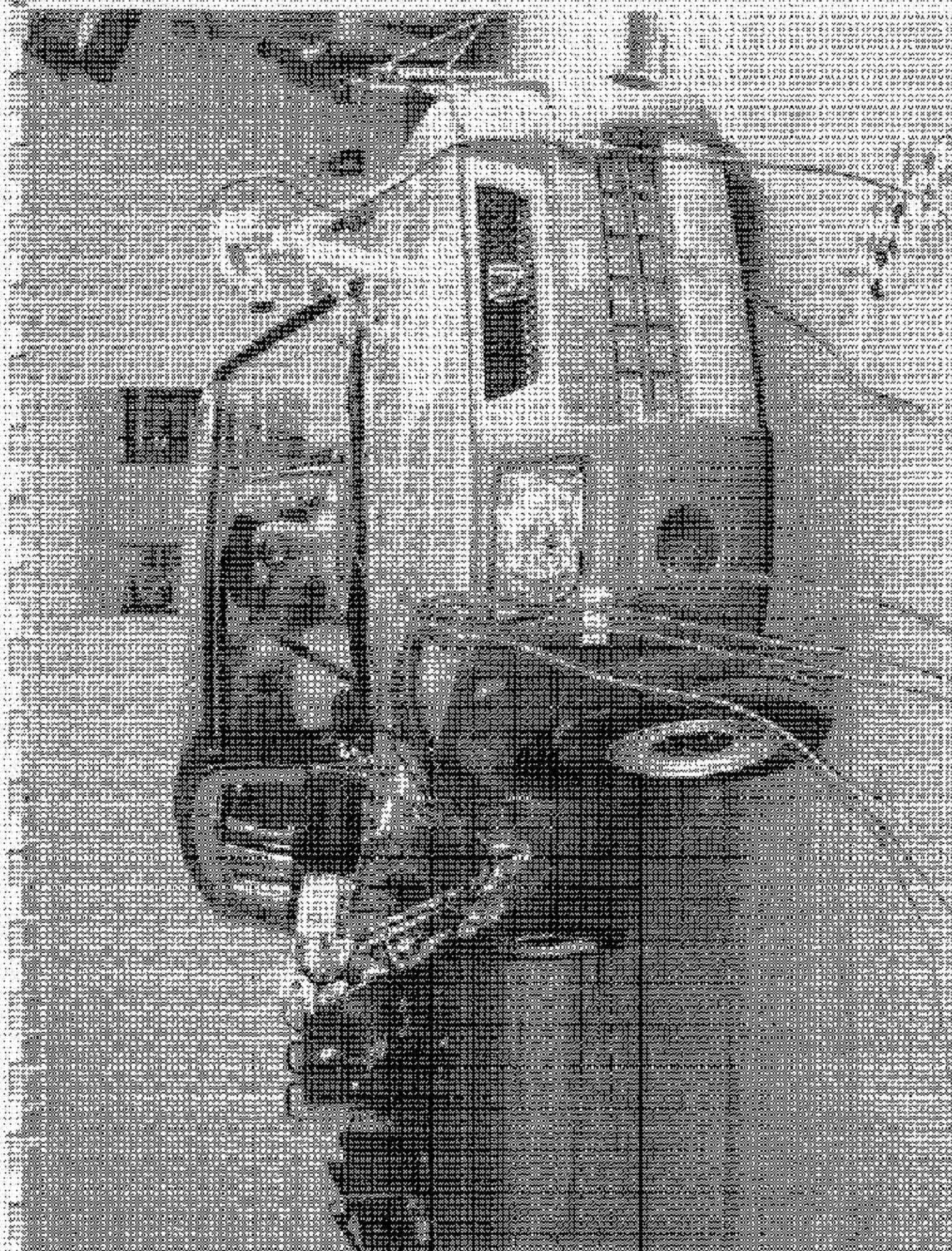


Figure 1.1 DET. FIRST FRONT VIEW OF FIRST VEHICLE

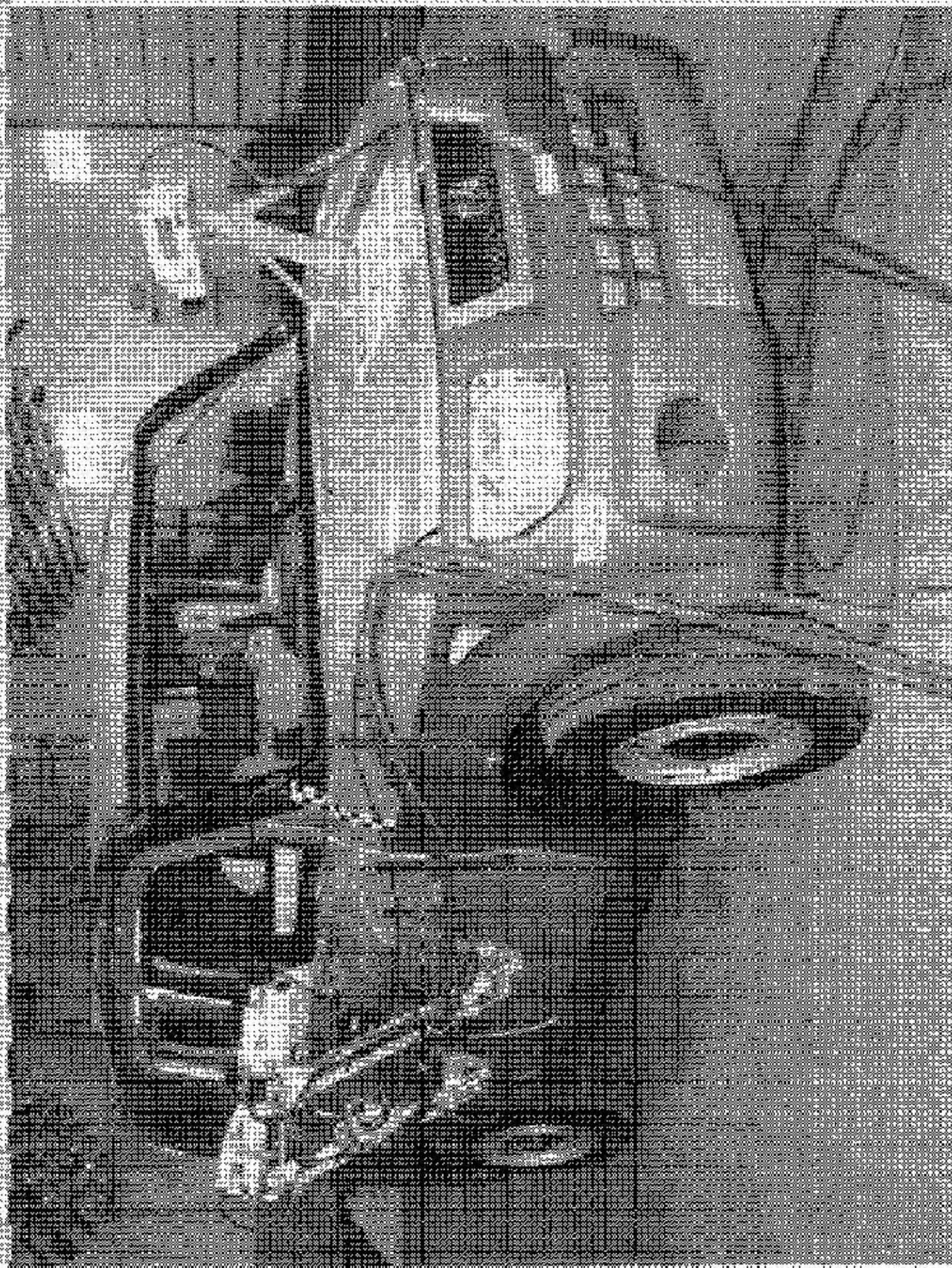
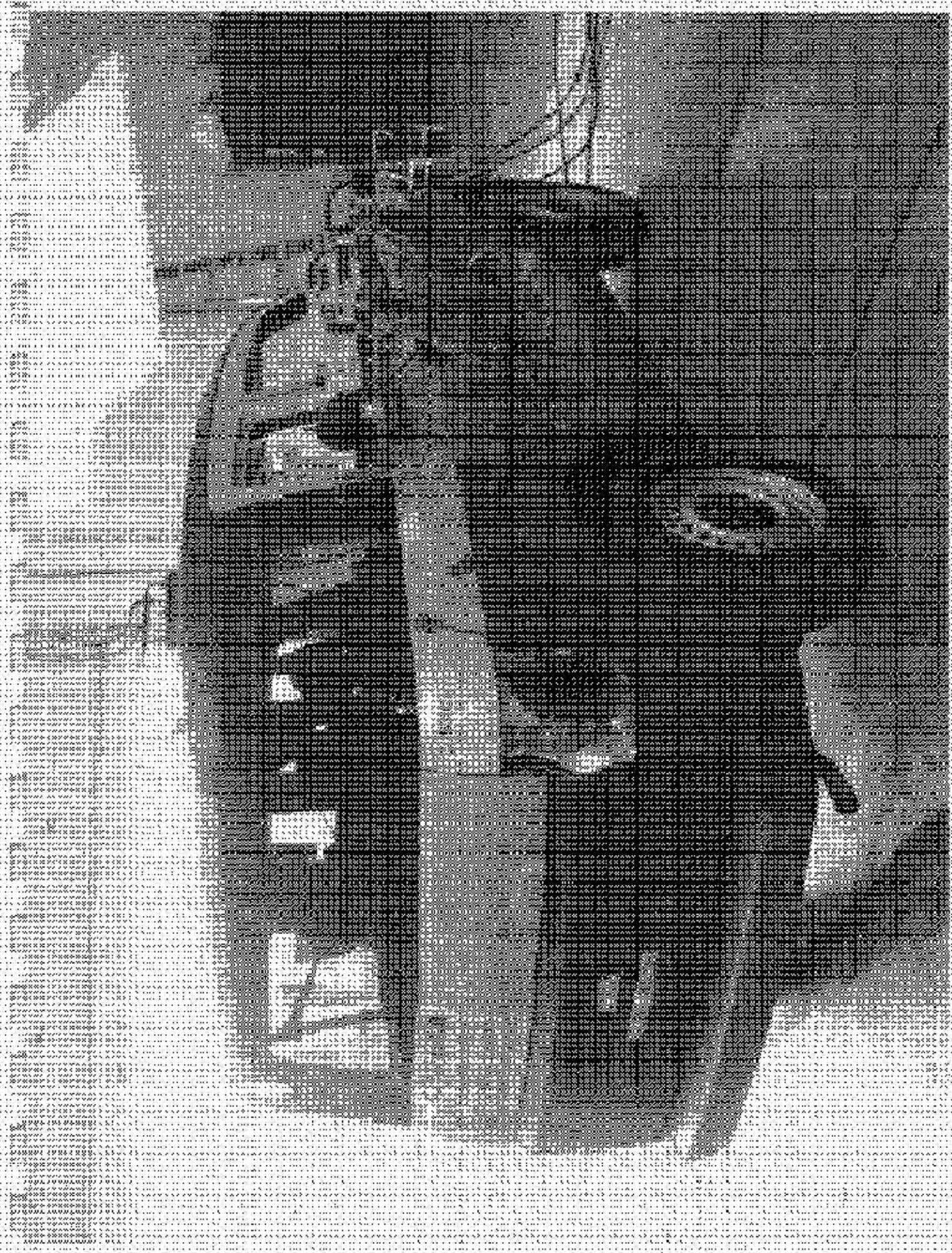
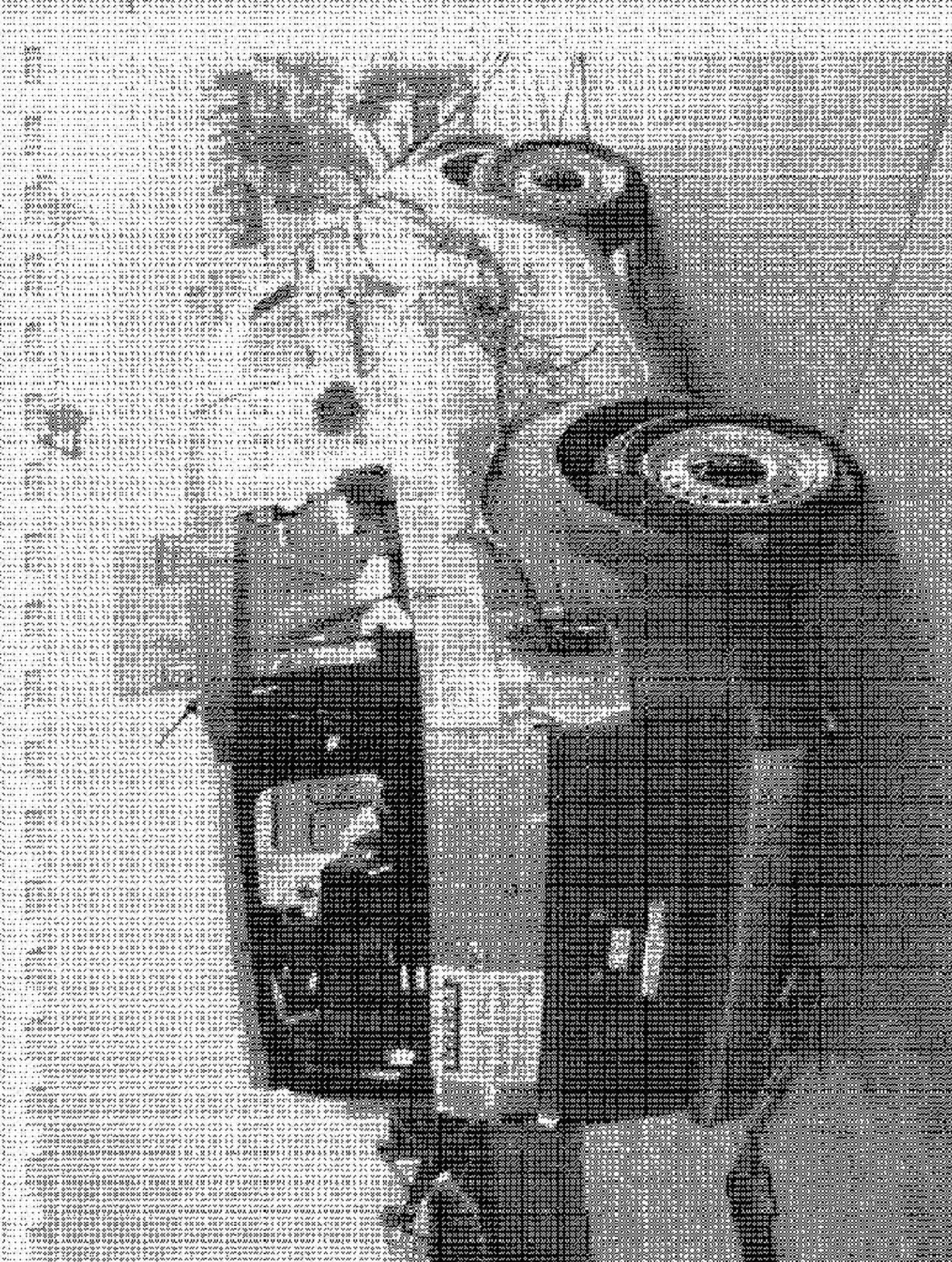


Figure A-12. Pictorial representation of test vehicle.



FROM A THREE-FOLD NIGHT OF A NEW ORLEANS NIGHT



FILE A-14 POSITIVE RIGHT REAR VIEW OF TONY VINT

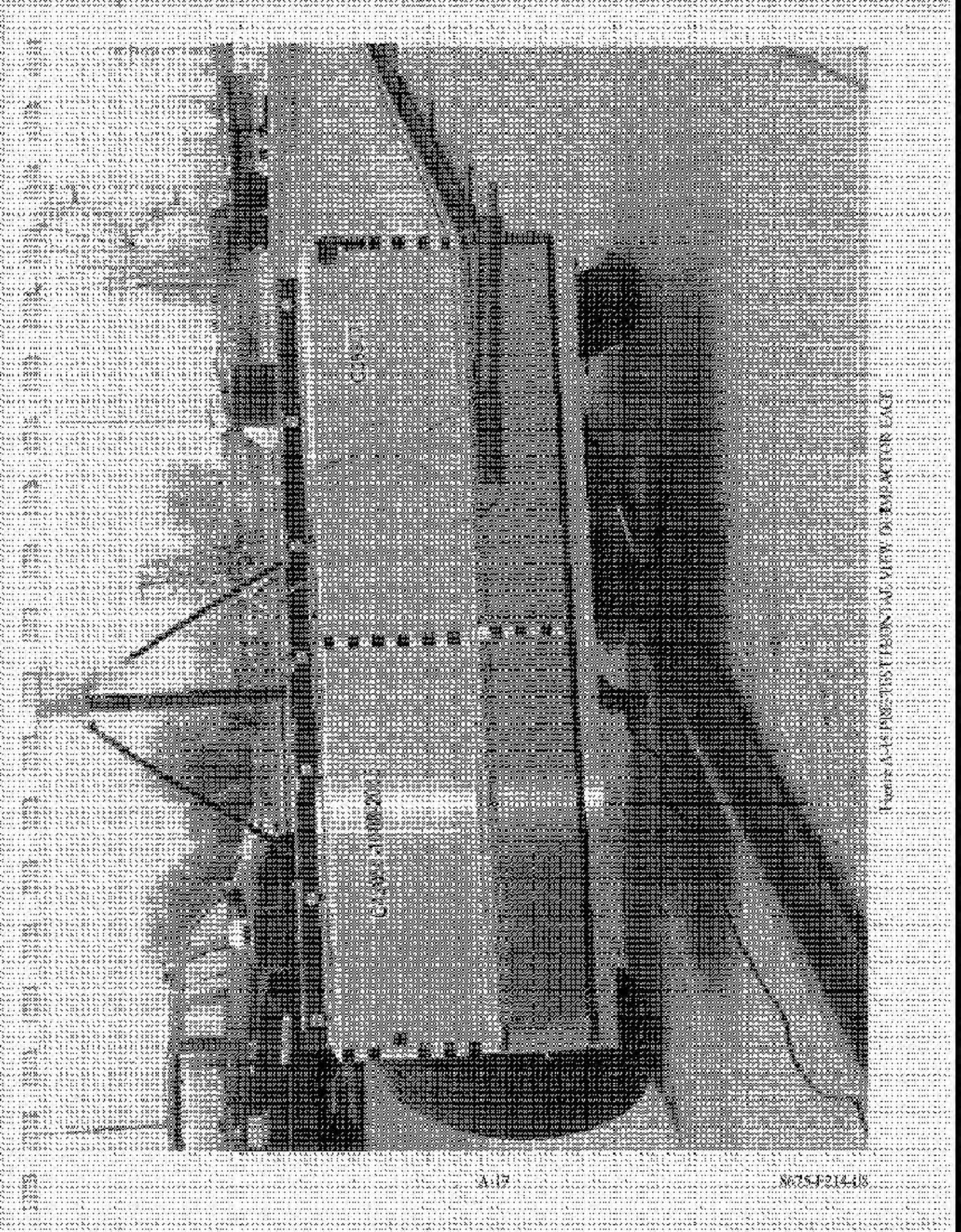


Figure 1-1: PRELIMINARY VIEW OF IMPACTOR LAGE

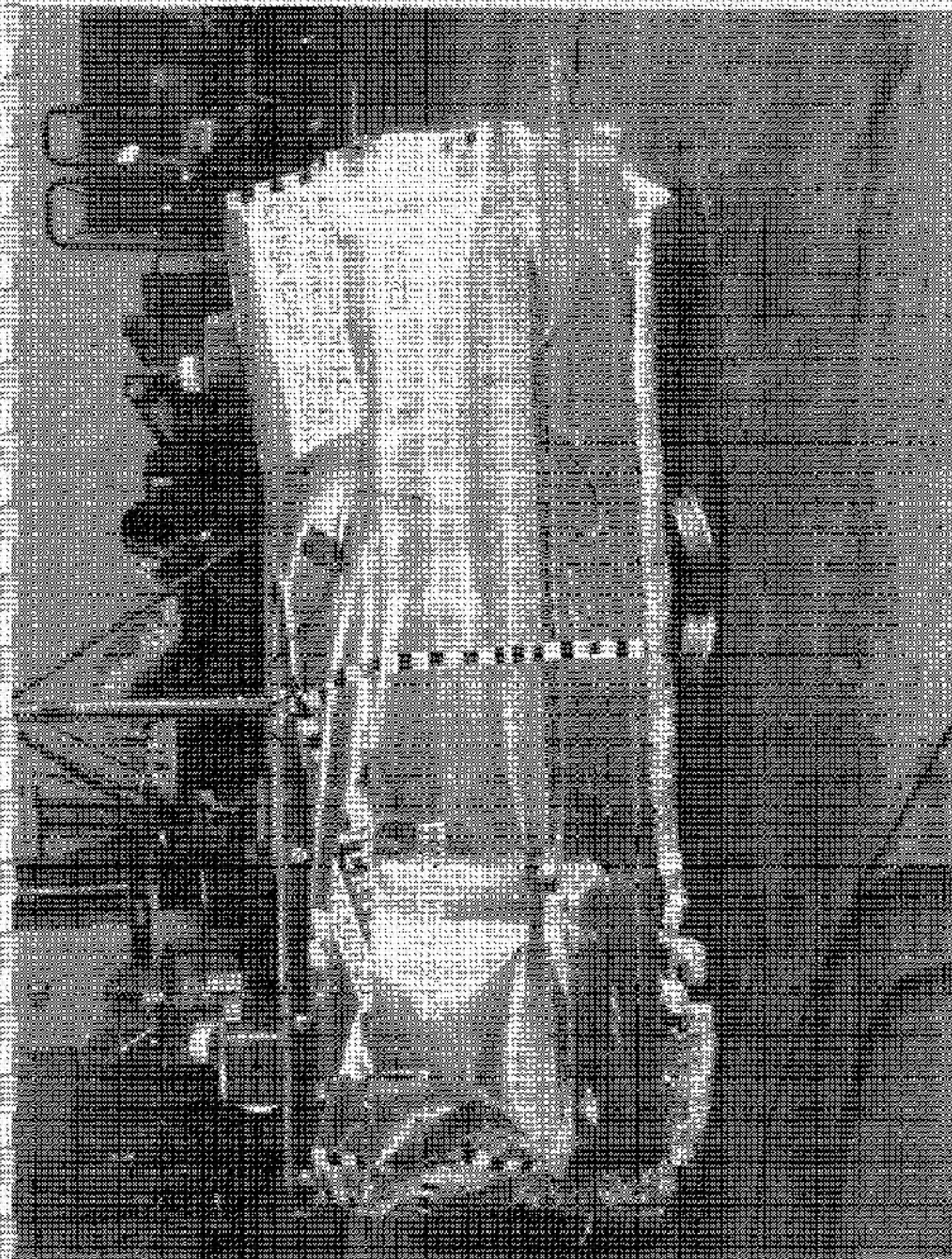


FIGURE 1. FRONT VIEW OF PISTON TEST RIG

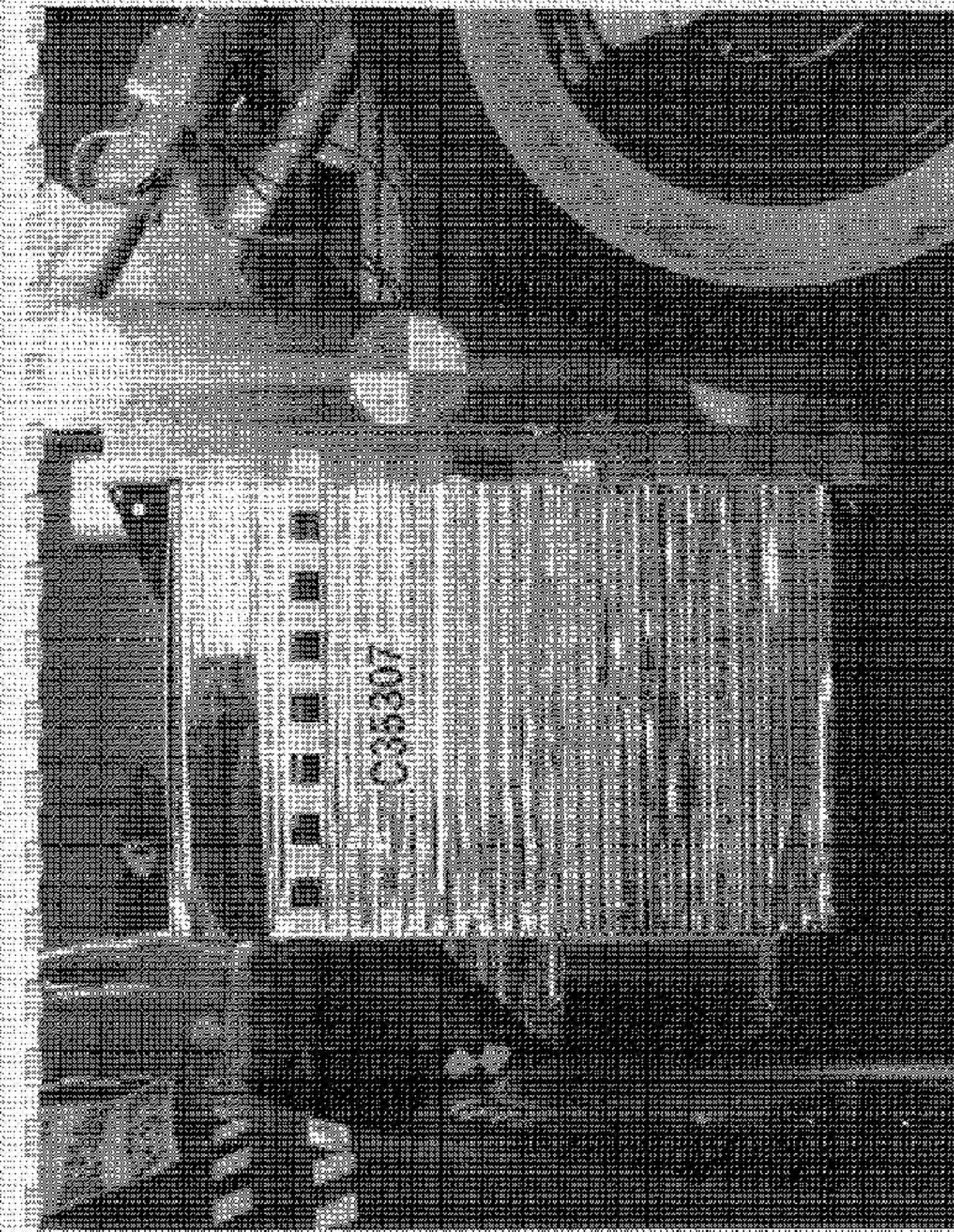


Figure A-10: PHOTOGRAPHY SIDE VIEW OF EXPLOSION FACILITY

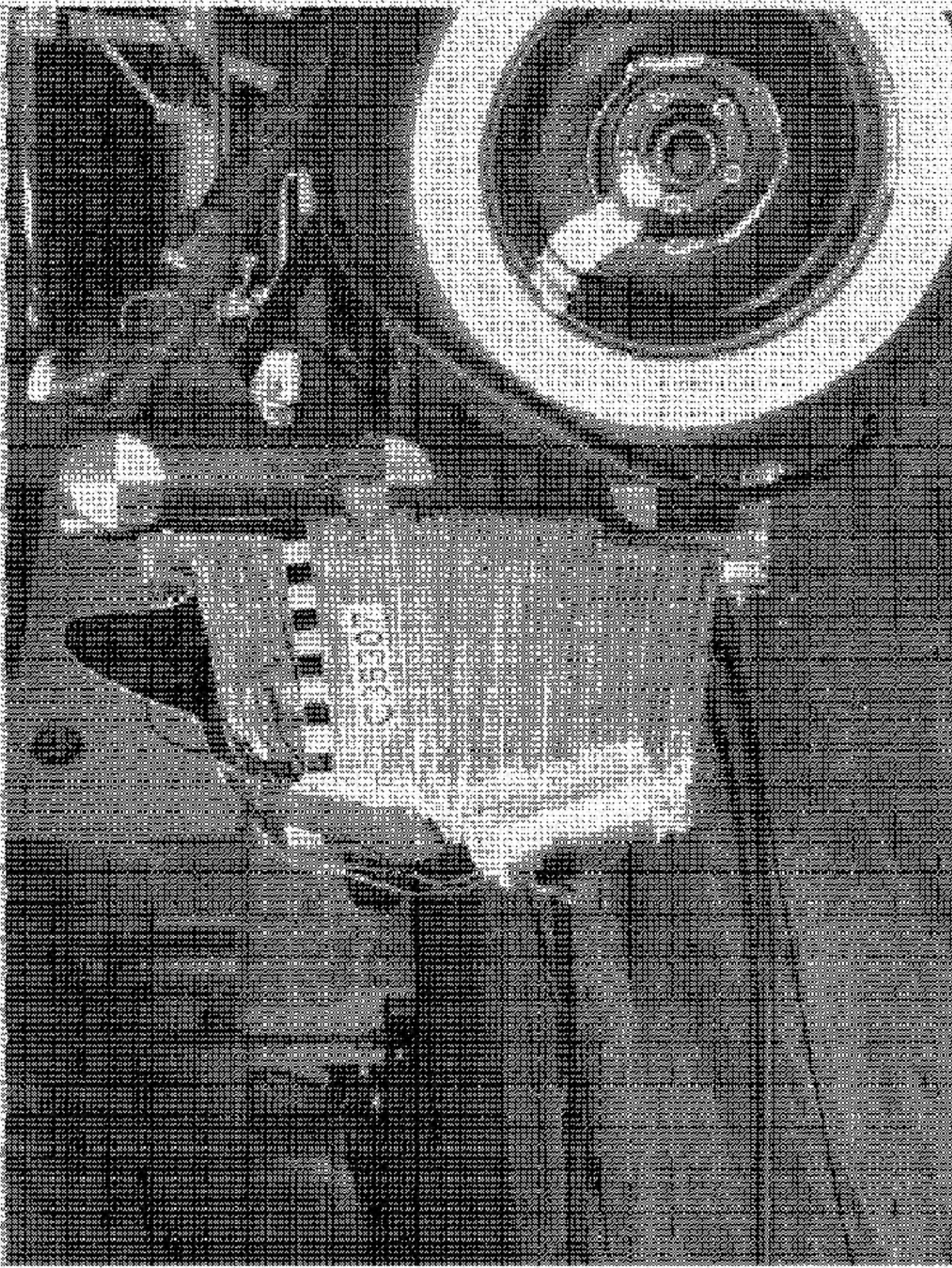


FIGURE 18-101-1-11 SIDE VIEW OF INJECTOR

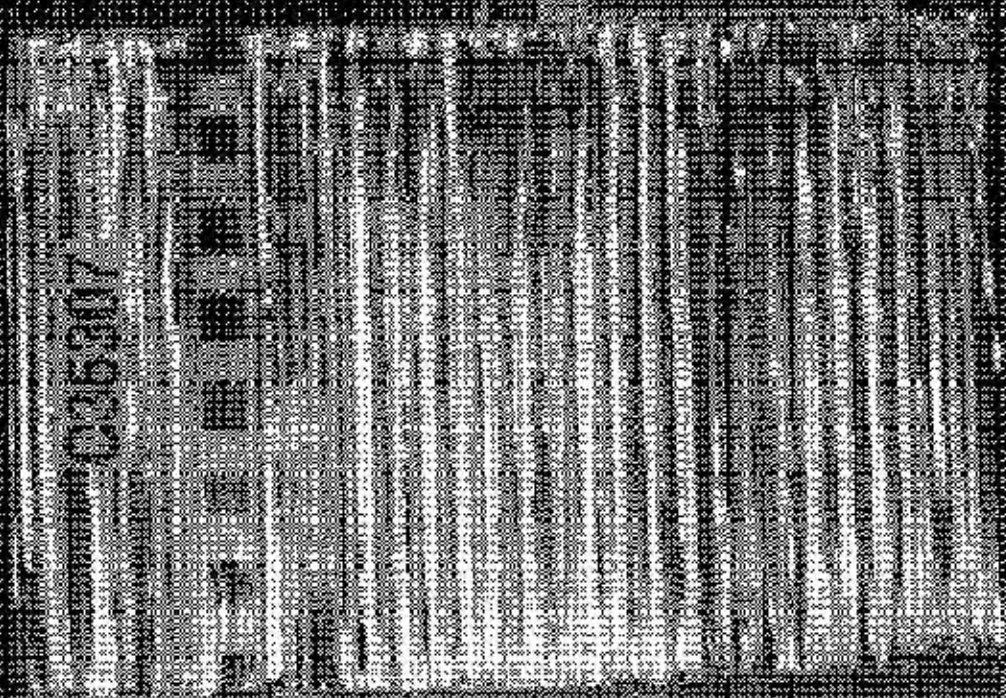


Figure A-50: First Night View of Inactive Port

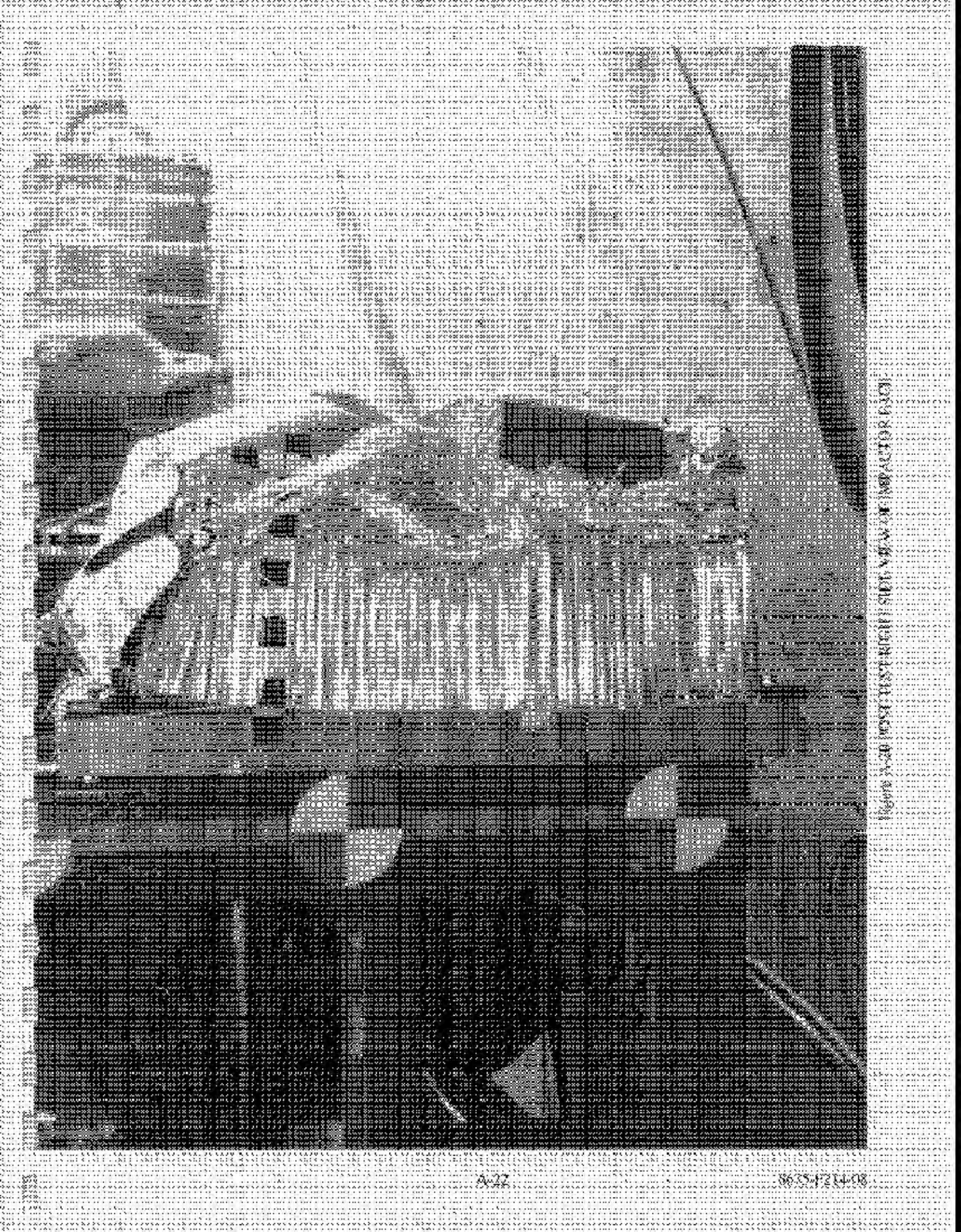


Figure 3-20: West Side View of Impactor Area

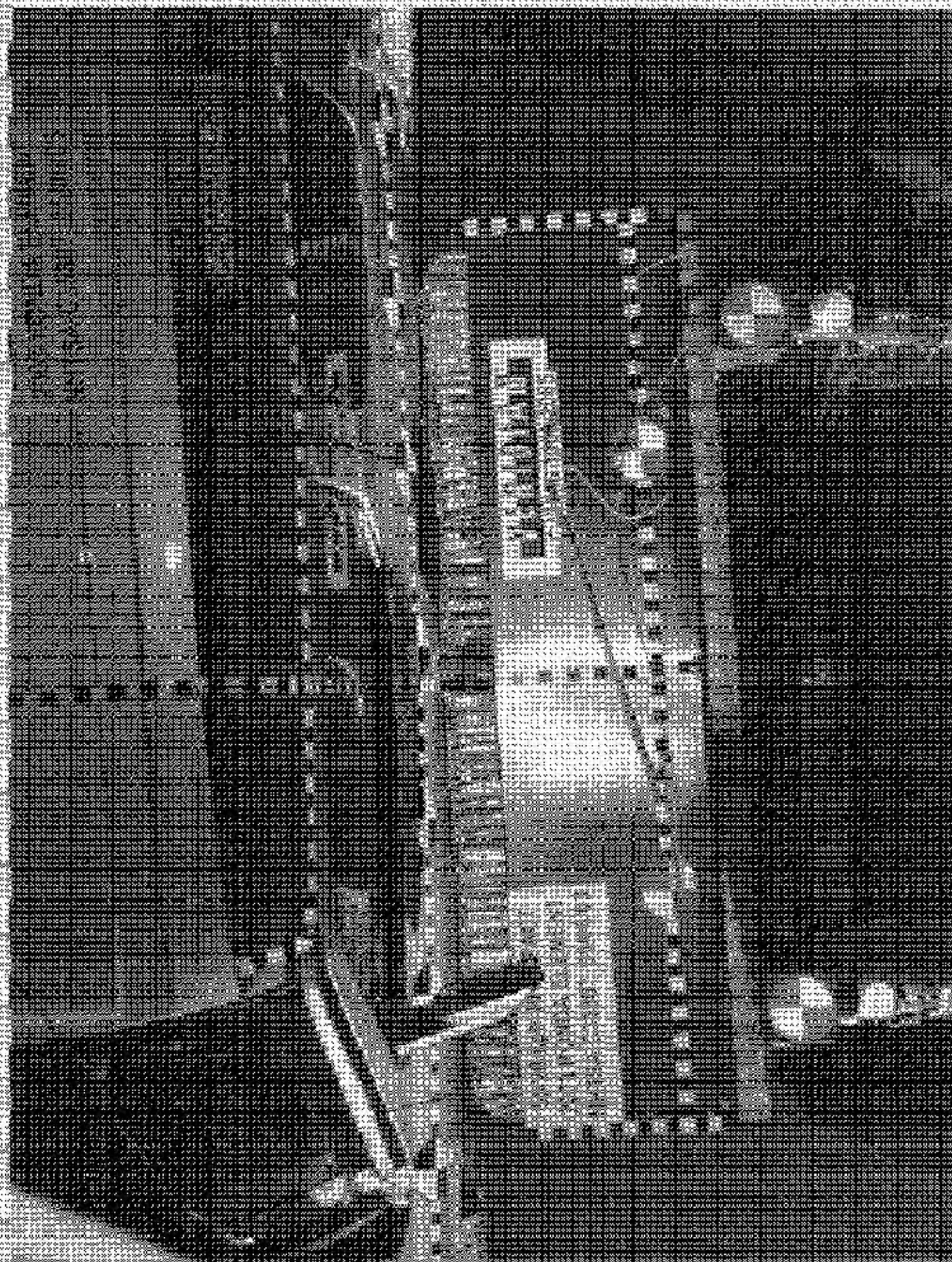


Figure 1. View of test facility from inside of impact face.

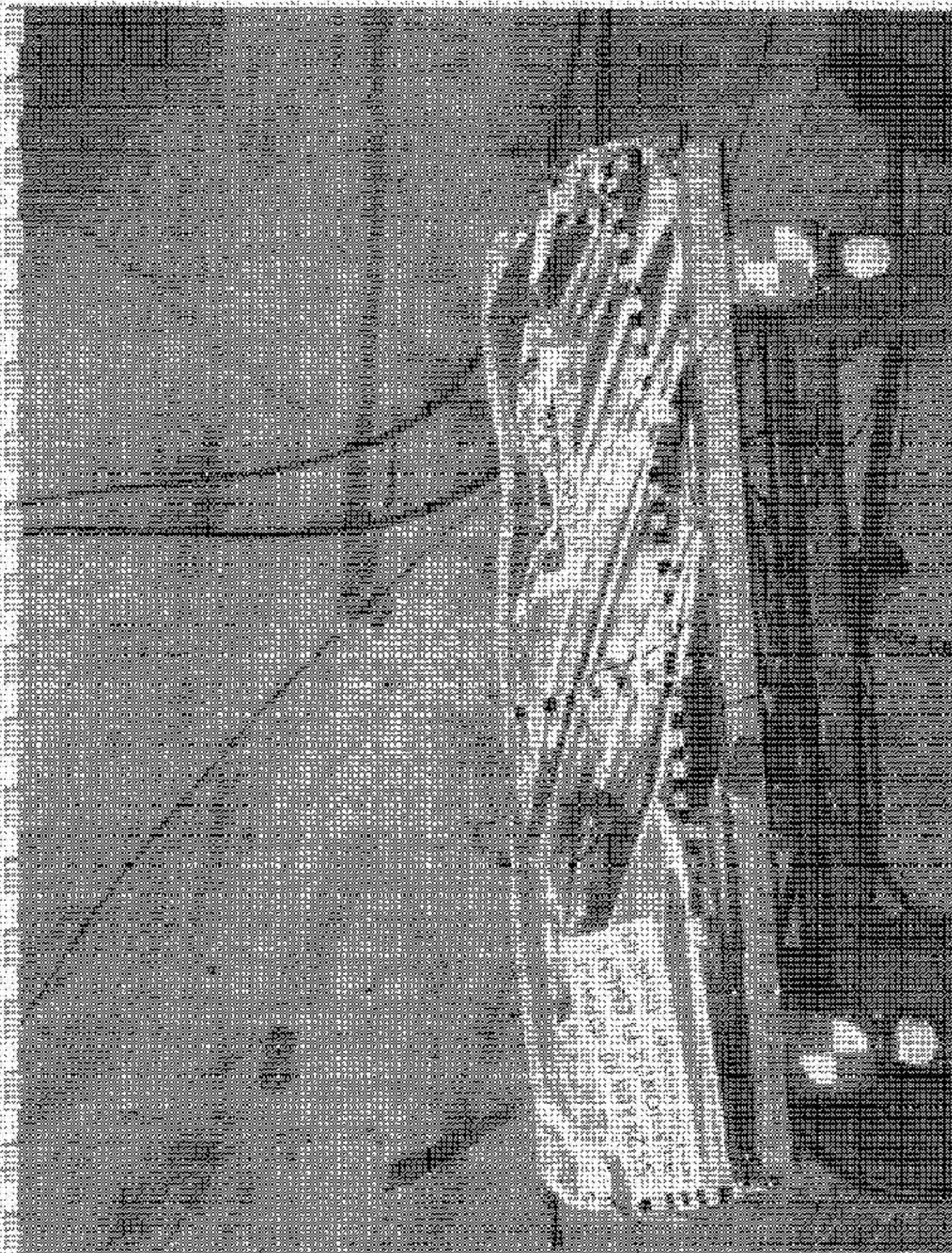


FIGURE 1. TEST-TUBE VIEW OF IMPACT DAMAGE

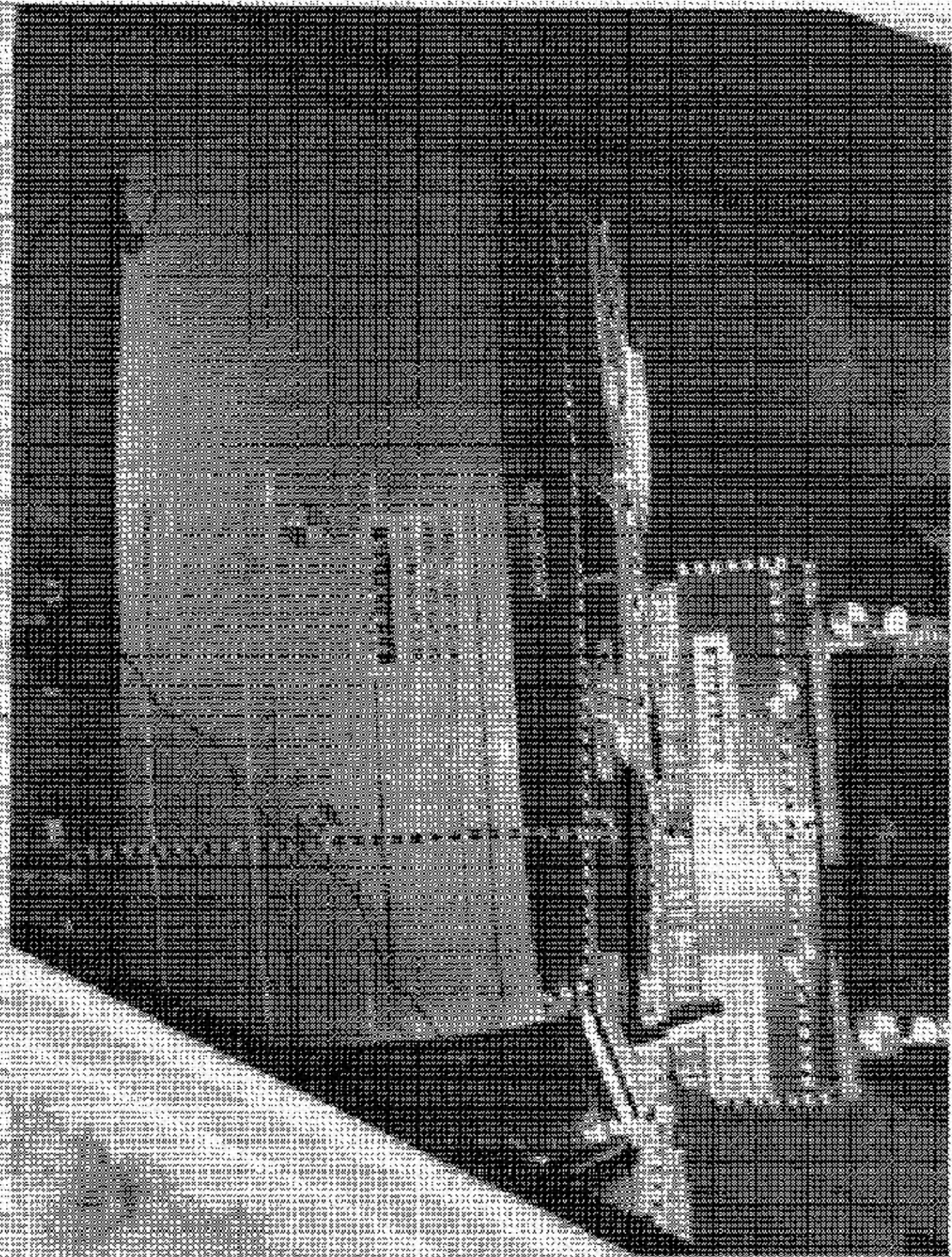


Figure 1. 11/11/1981. General view of the building.

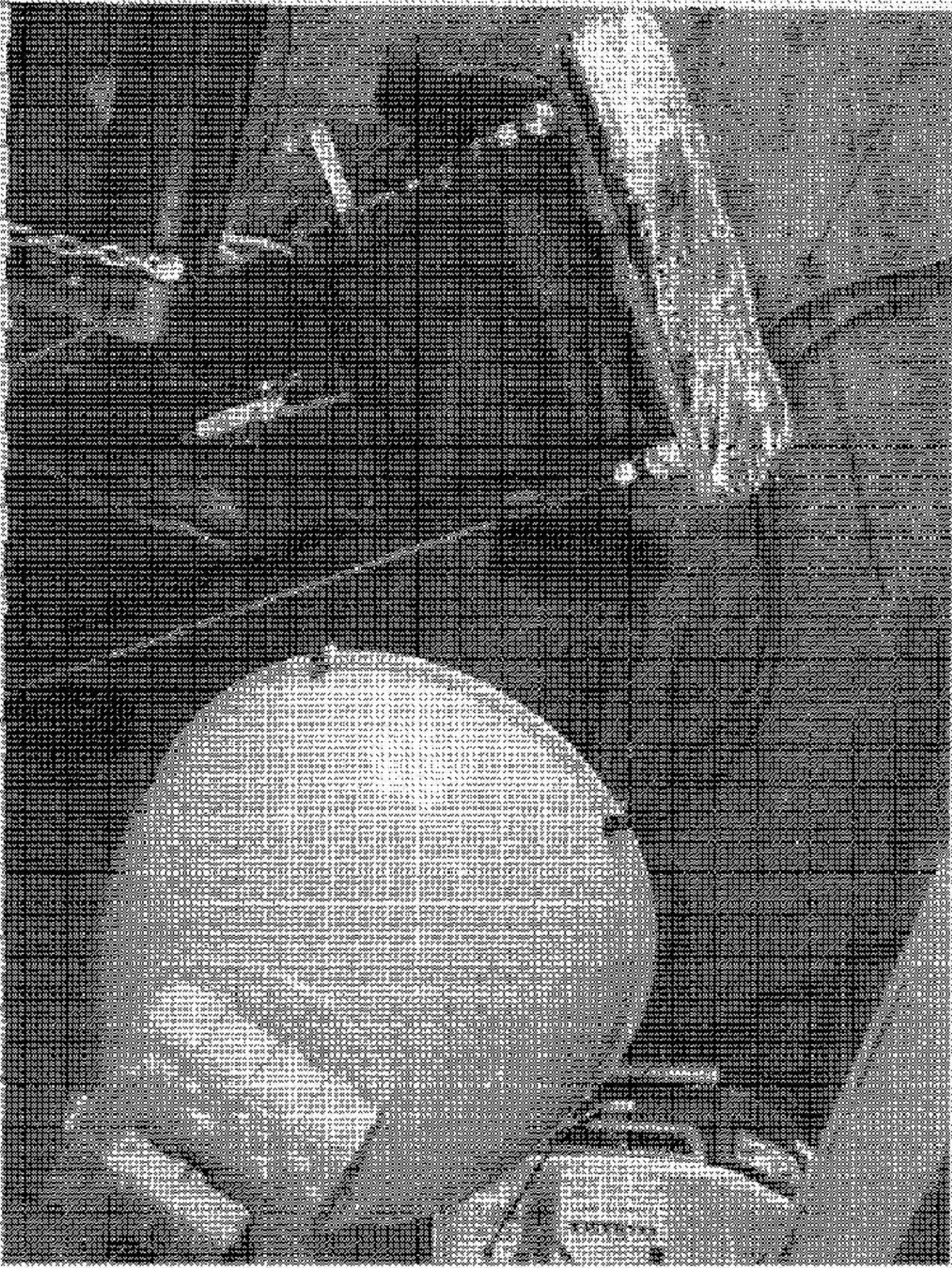
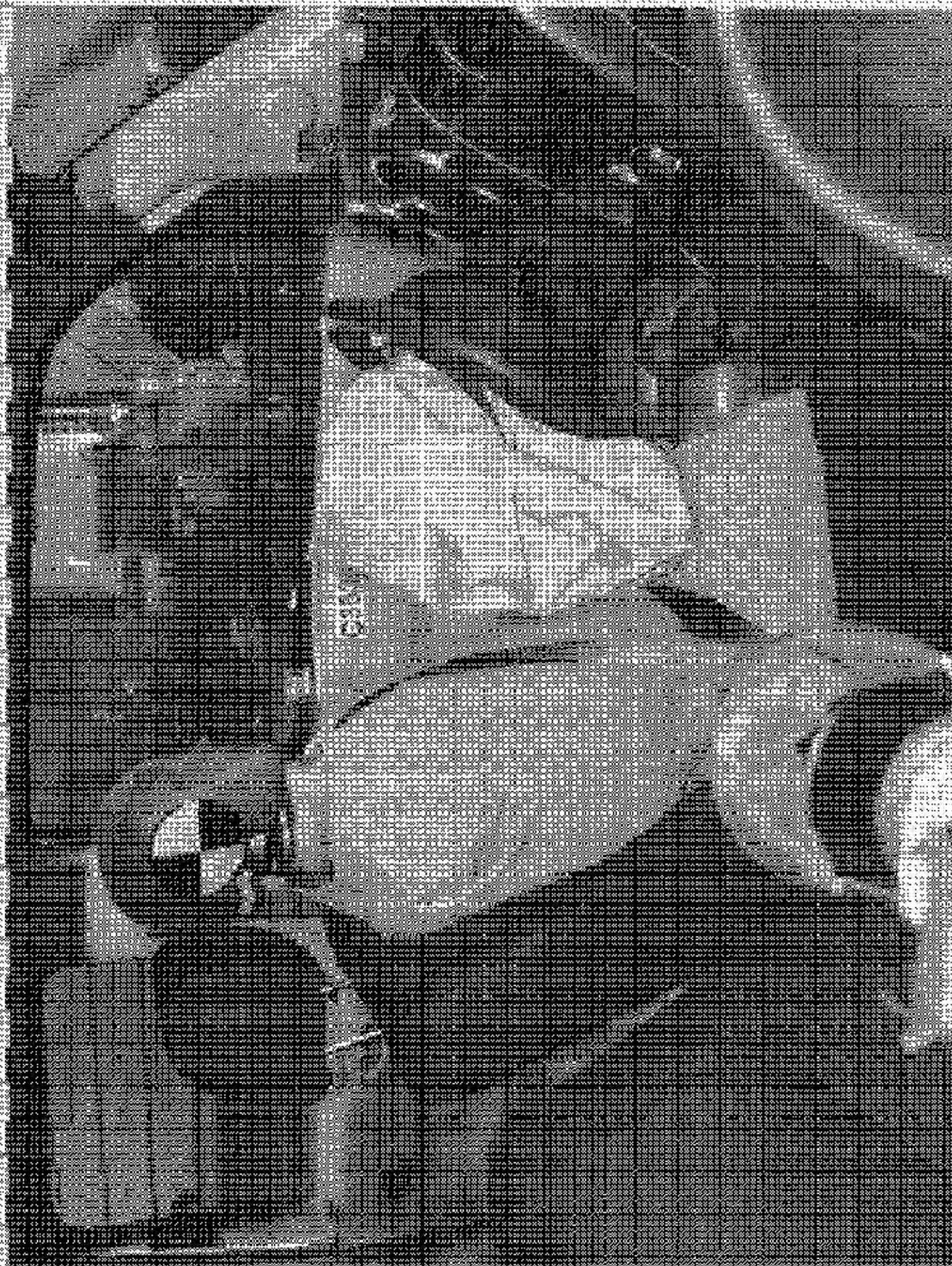


Figure A-24 POST TEST OVERHEAD VIEW OF HEAD AND NECK





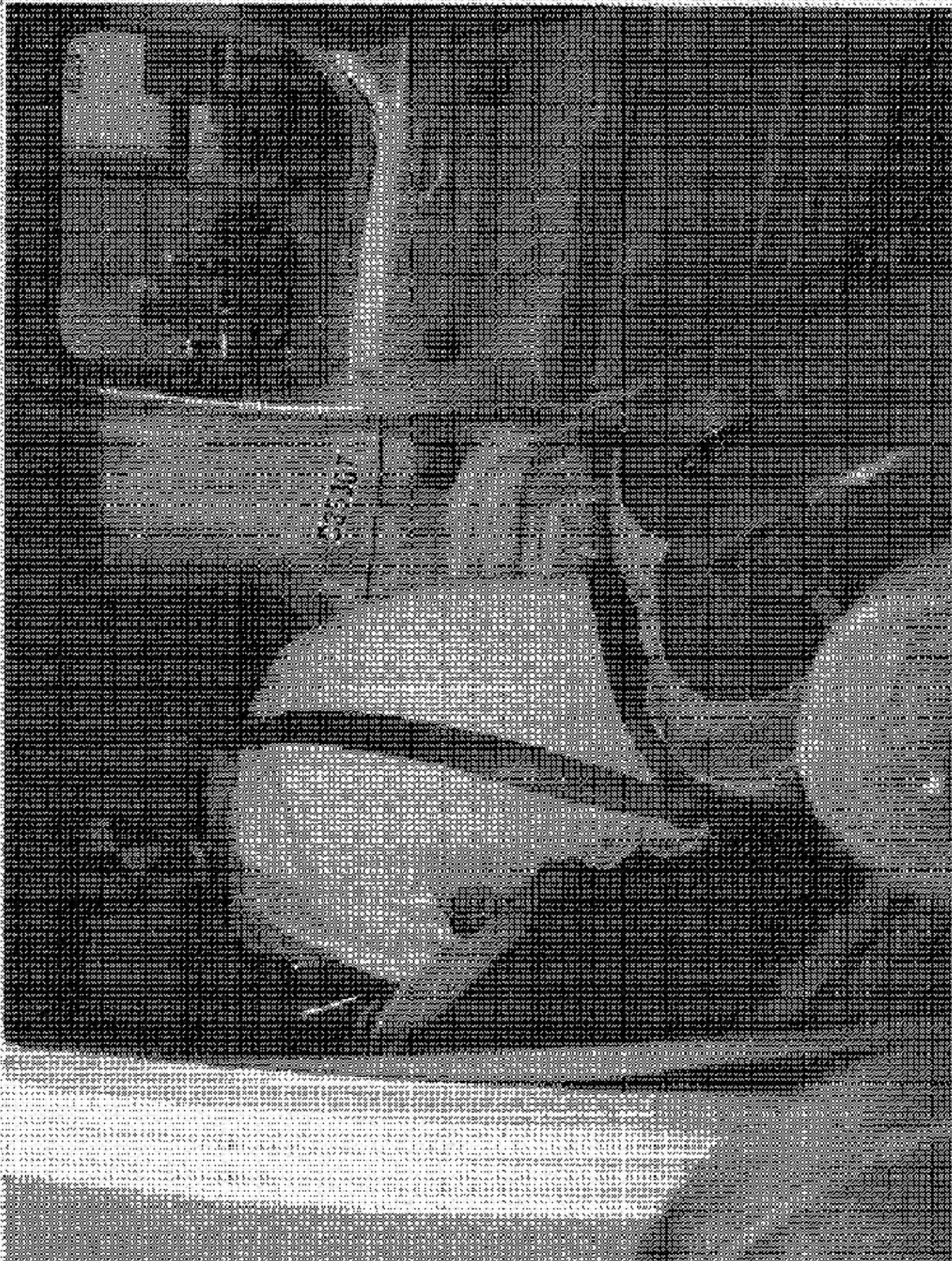


FIGURE 1. A SUSPECTED RIBBON CUTTING COMPARTMENT WITH A RIBBON CUTTING

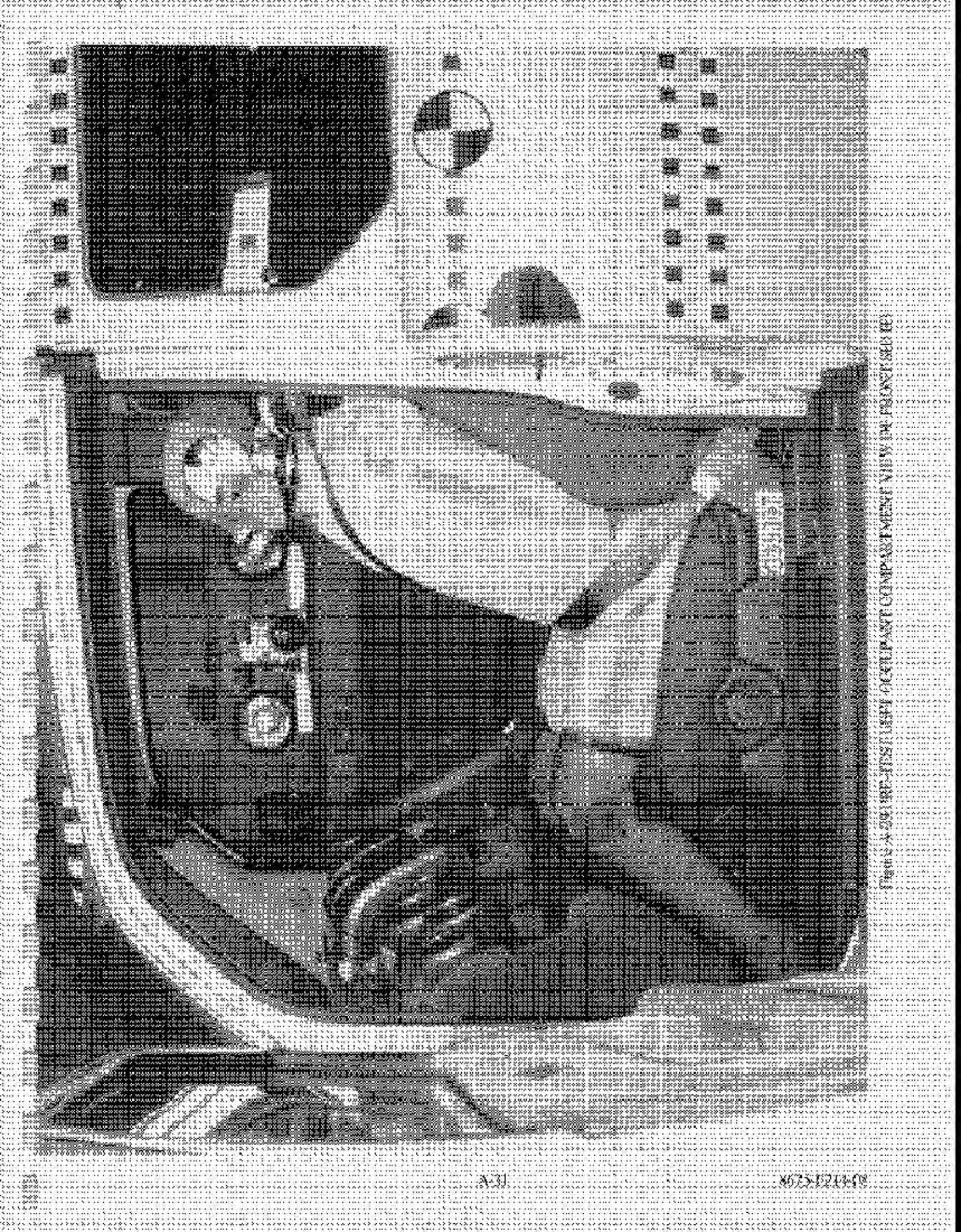


FIGURE 2 - 2ND LIEUTENANT OCCUPANT COMPARTMENT VIEW IN FRONT SEAT



Figure 1. X-POST TEST LEFT OCCIDENT COMPANY NEW YORK, NY

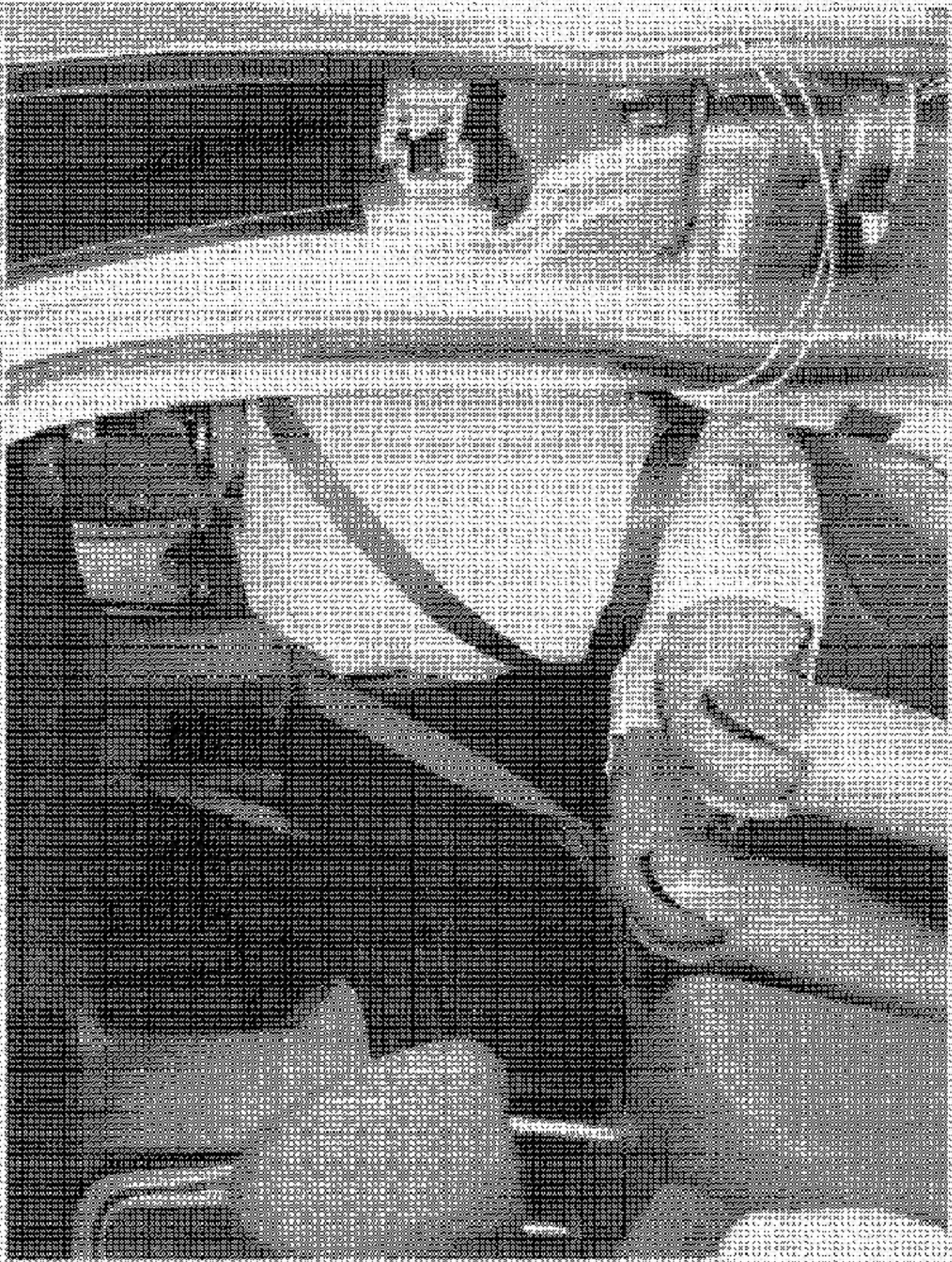
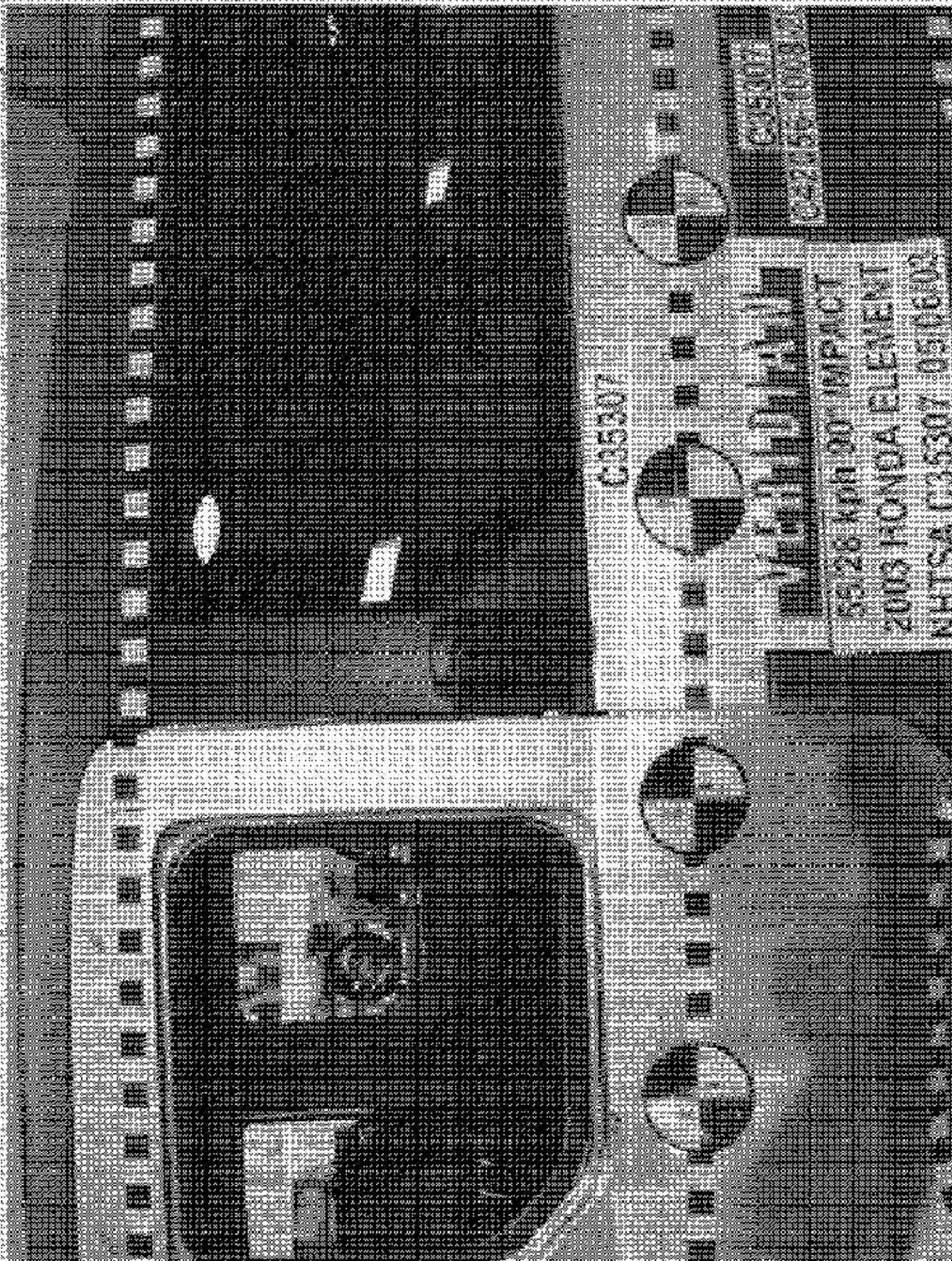


FIGURE 1. A PERSON IN A DARK, PATTERNED GARMENT STANDING IN A ROOM WITH A TILED FLOOR AND A WALL-MOUNTED OBJECT.

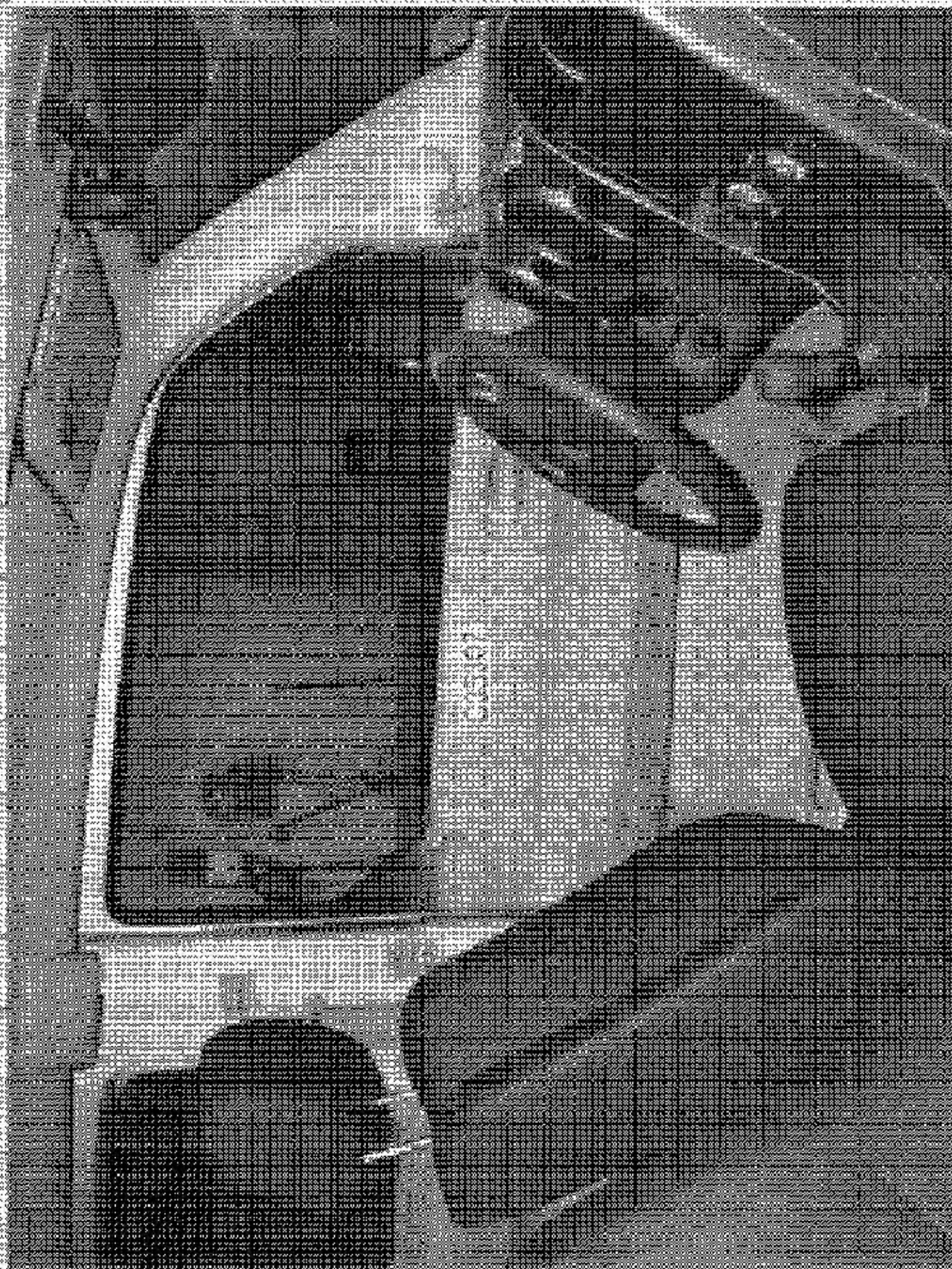


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CAPSULE

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NHTSA C35307 051602

SAFARI QPWT TEST LEFT QPWT FRONT CENTER VIEW CHILDRN



PHOTOGRAPH BY JAMES H. HARRIS



Figure 1. A person lying down, showing the location of the person's head.

025307

Figures A-65 PRE-FAST INTERIOR OF REAR DOOR

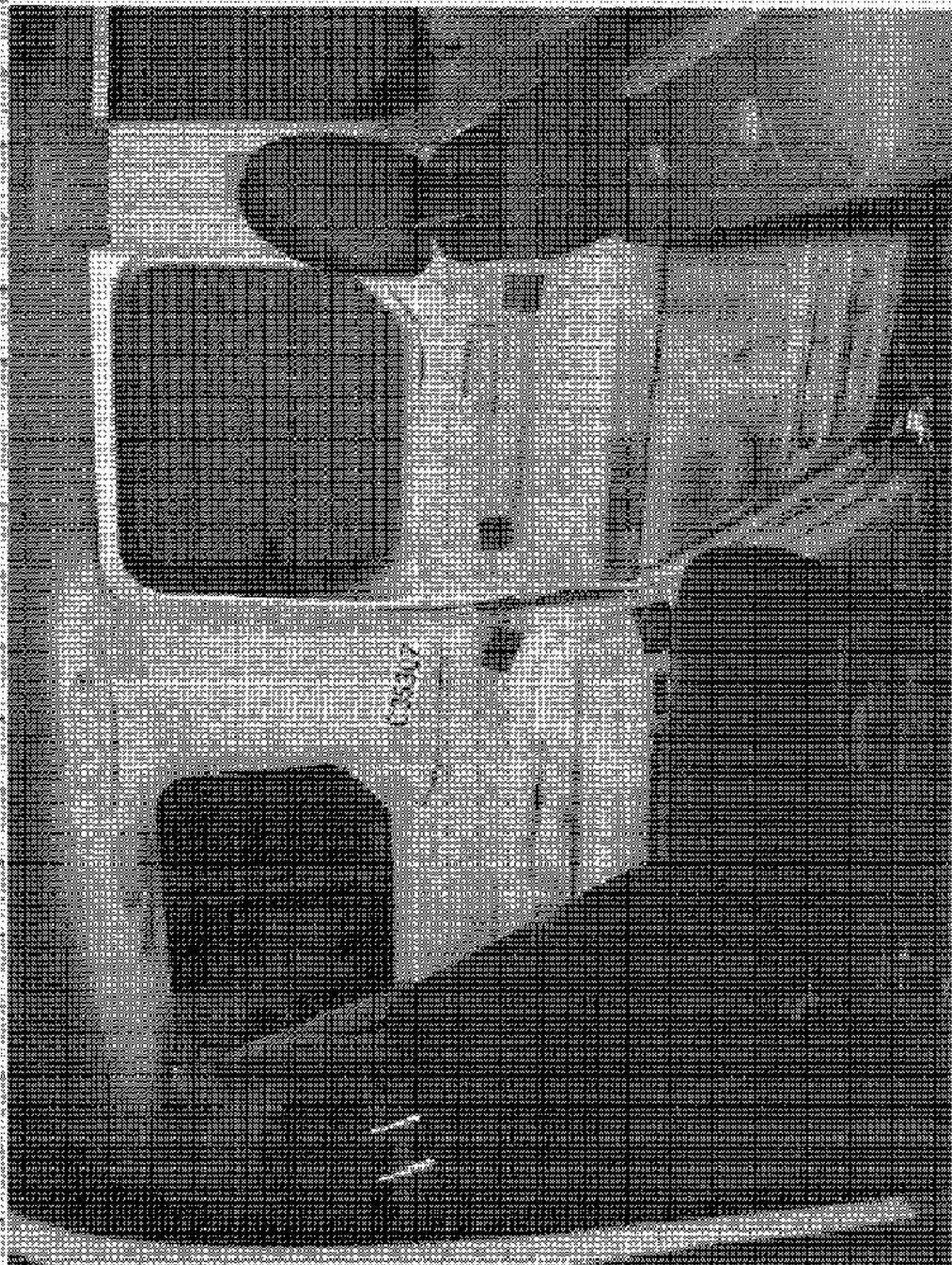


Figure A-10: PINT-TAST INTENTION OF NEAR LOOKER SHOWING SIDE VIEW LOCATIONS

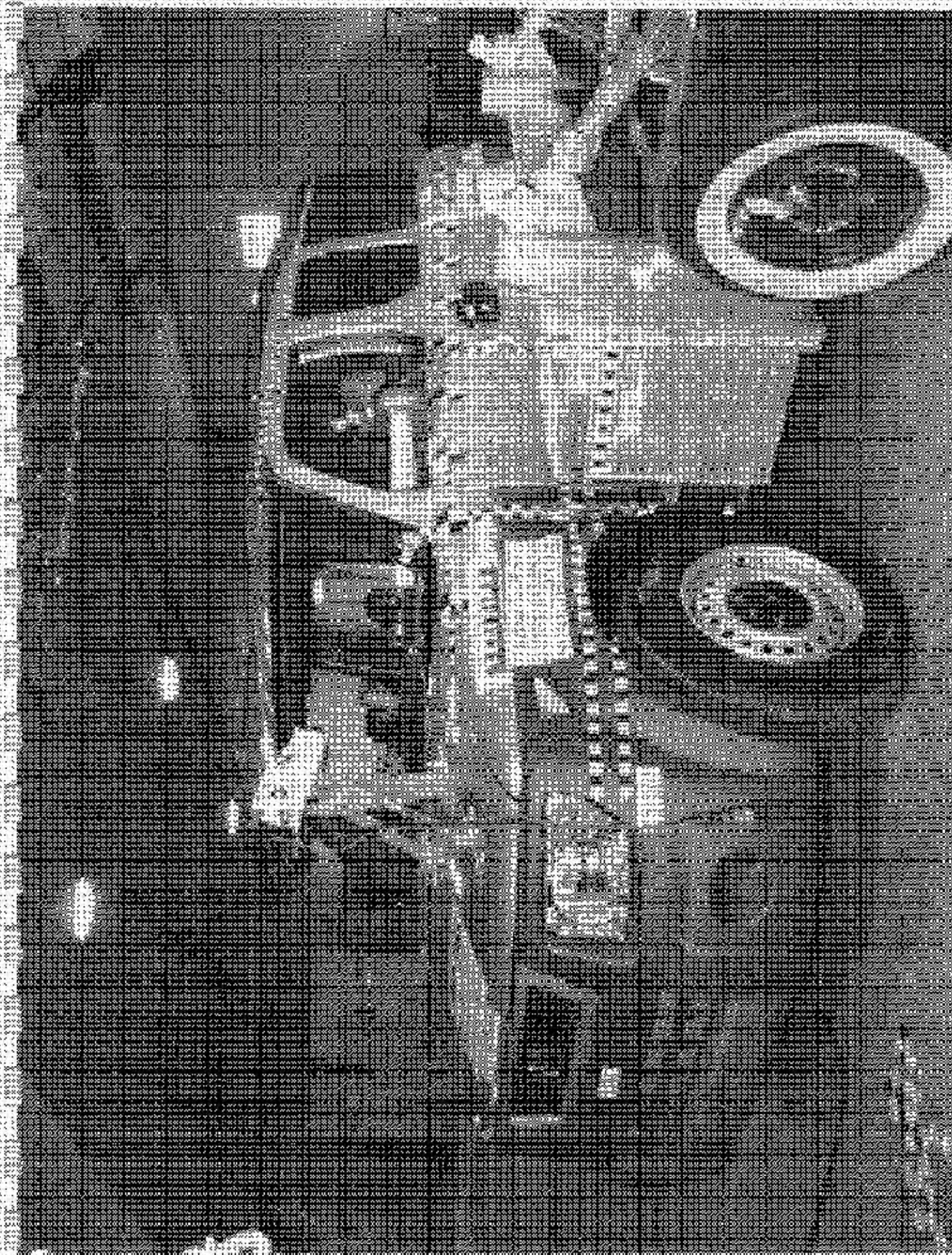


Figure 8. A large, high-speed camera with a large lens and a large sensor.

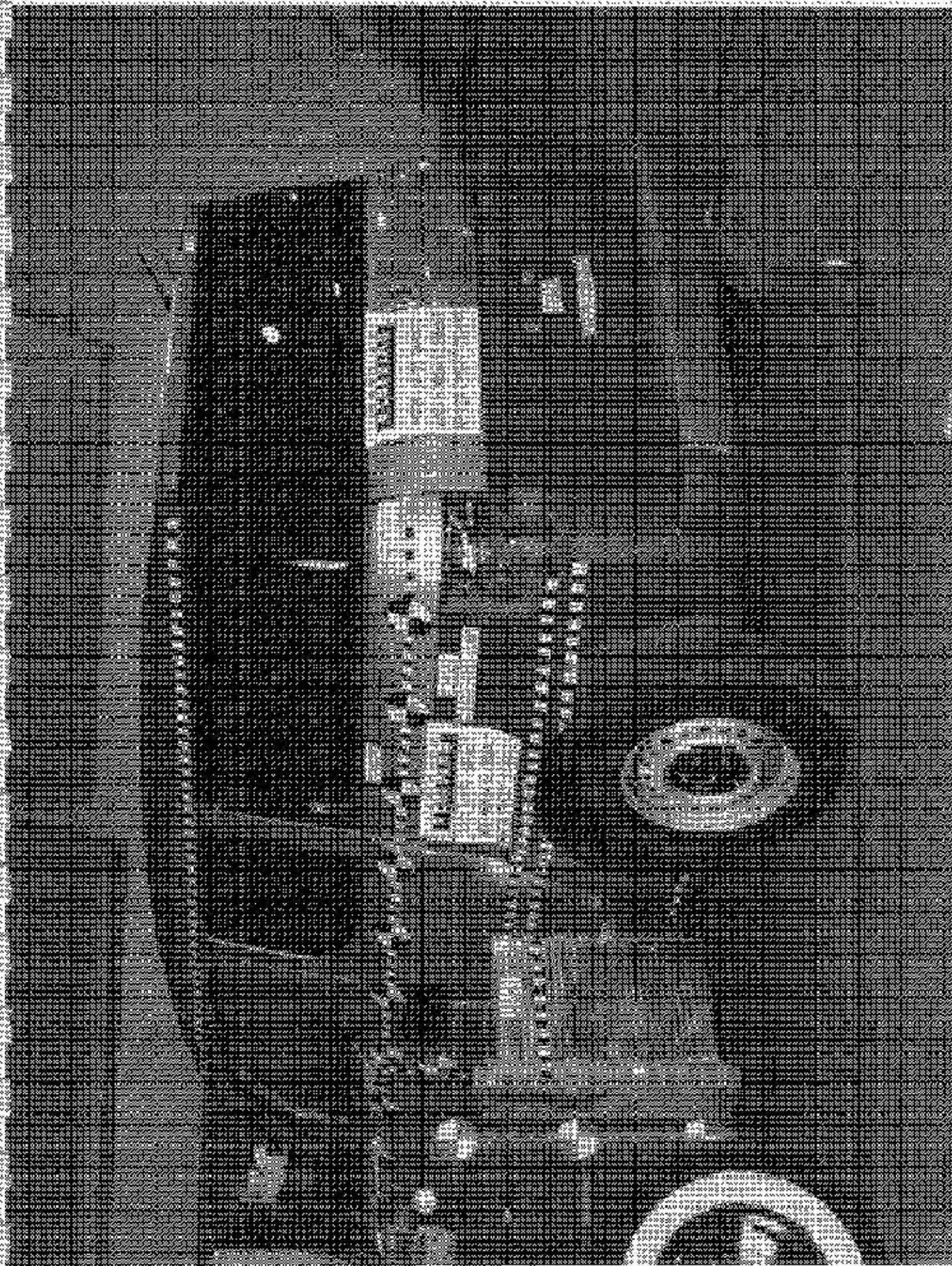


FIGURE 1. PRE-TEST VIEW OF MEDIUM MOTOR FACILITIES



Figure A-99 POST-TEST COMPOSITE VIEW OF THE ACT POINT TARGET

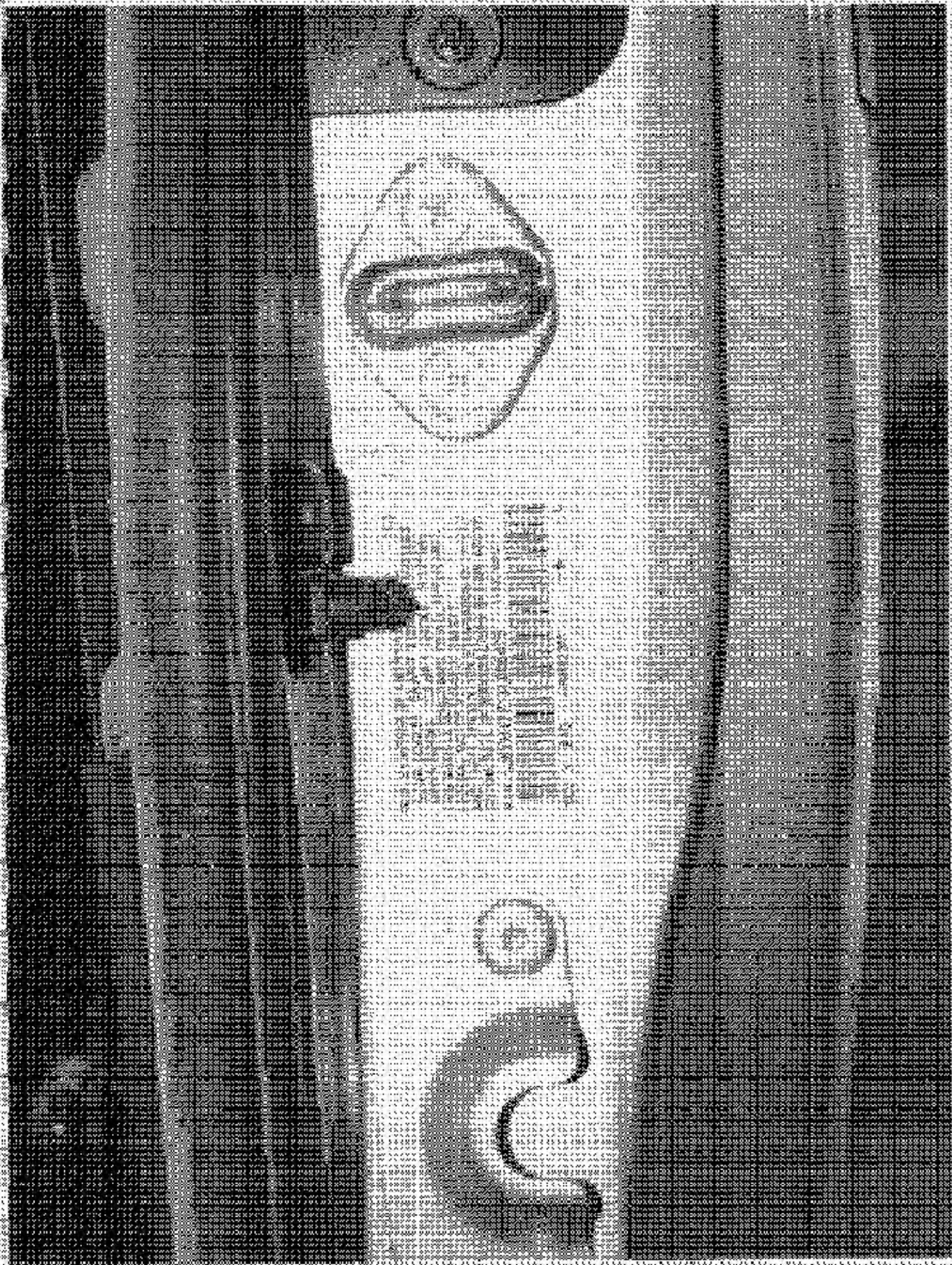
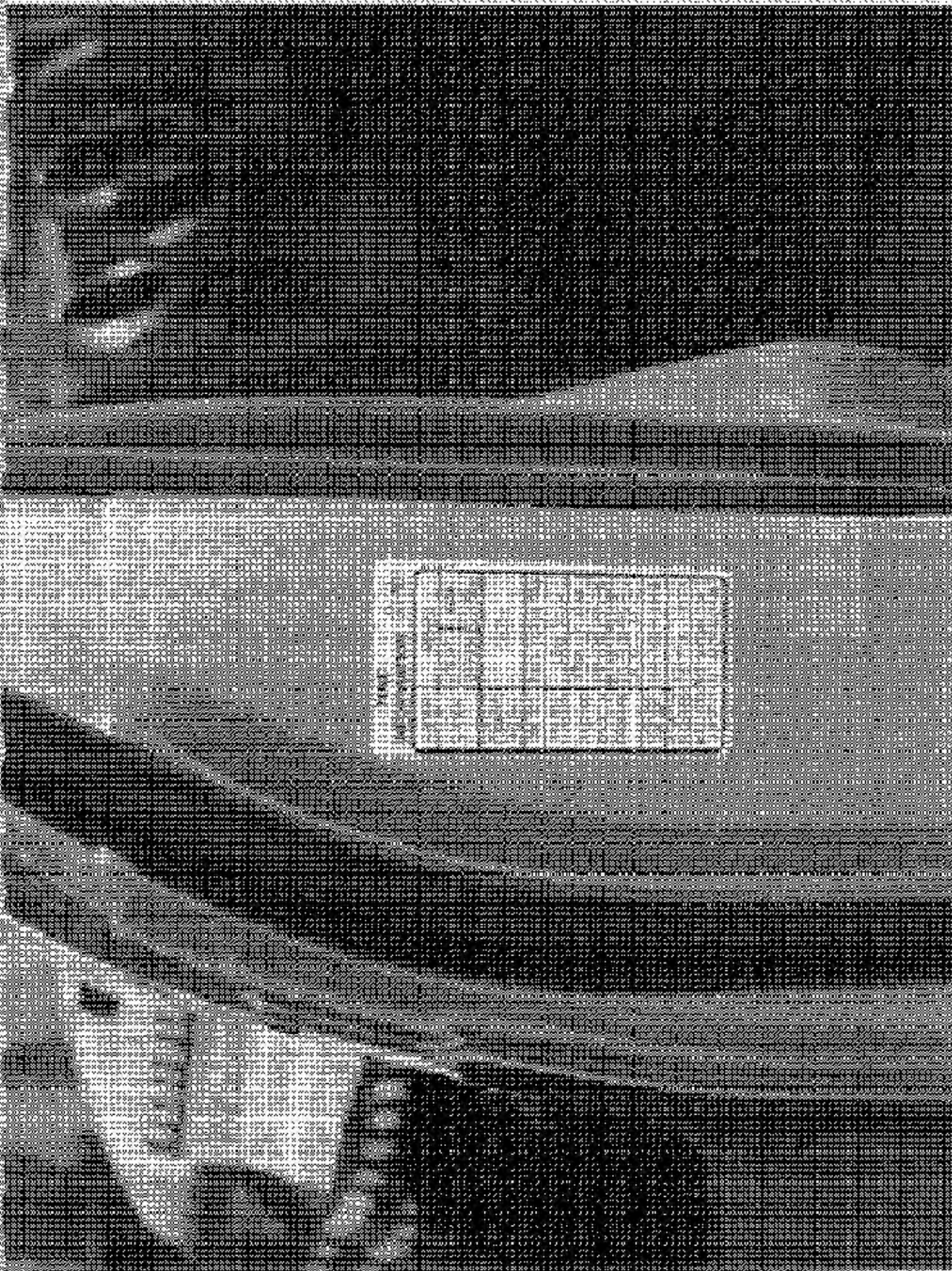
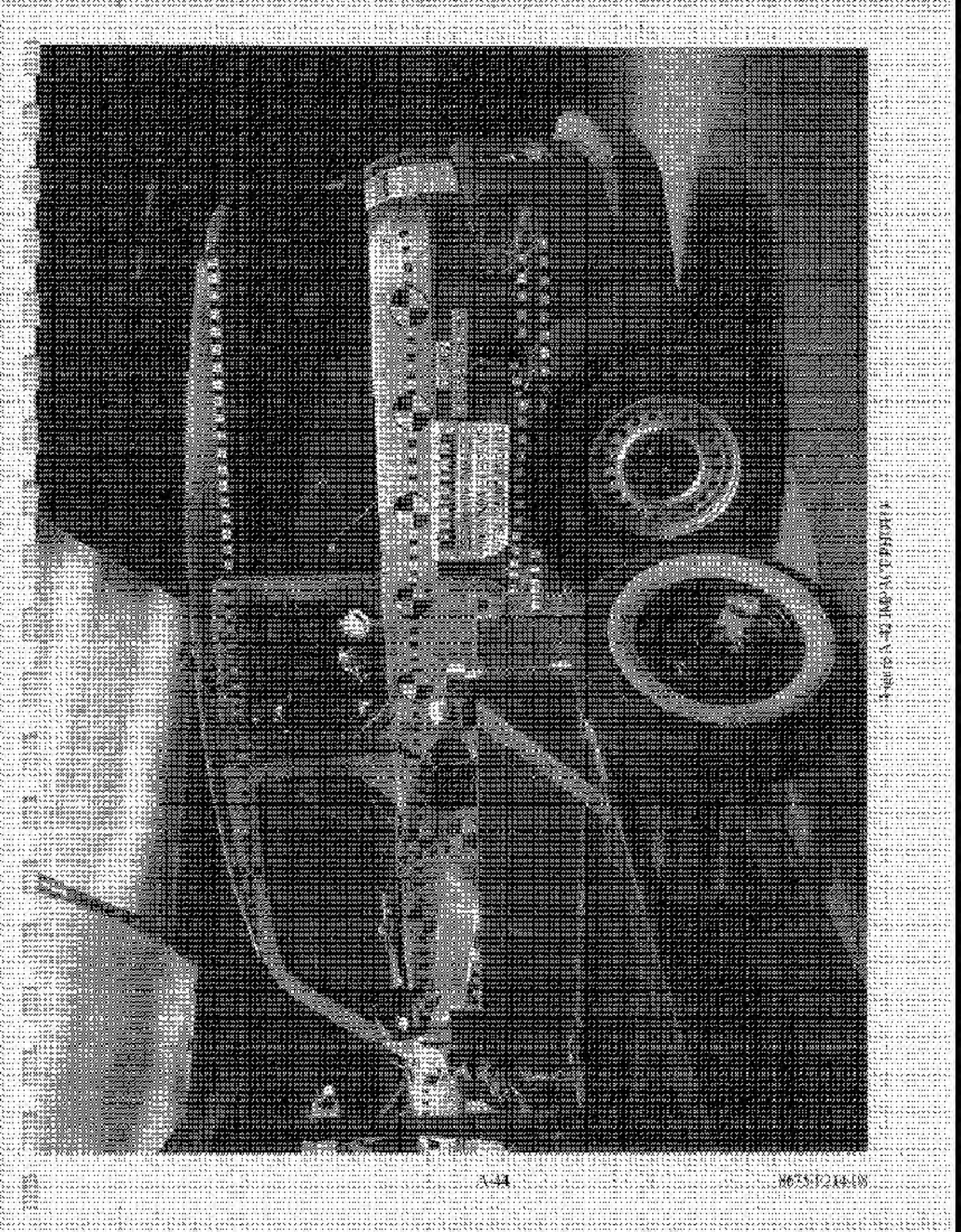


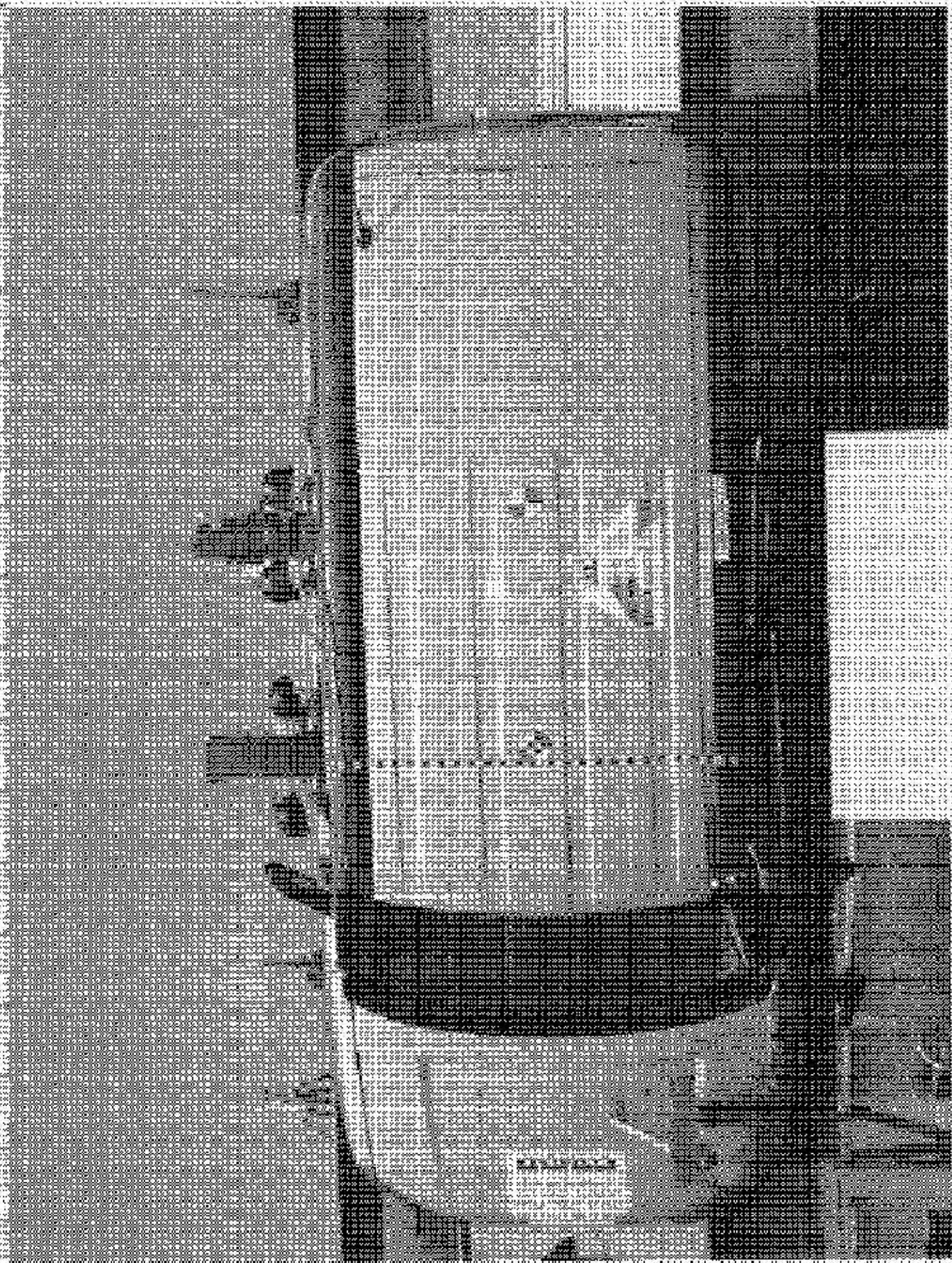
Figure A-40 CLOSE-UP VIEW OF VEHICLE'S EDUCATION DATA



1760N A-4 CLETS PVIEW OF WHIRL STRE PLAND EXHBI



UNITED STATES PATENT OFFICE



FILED AT NEW YORK IN 1965

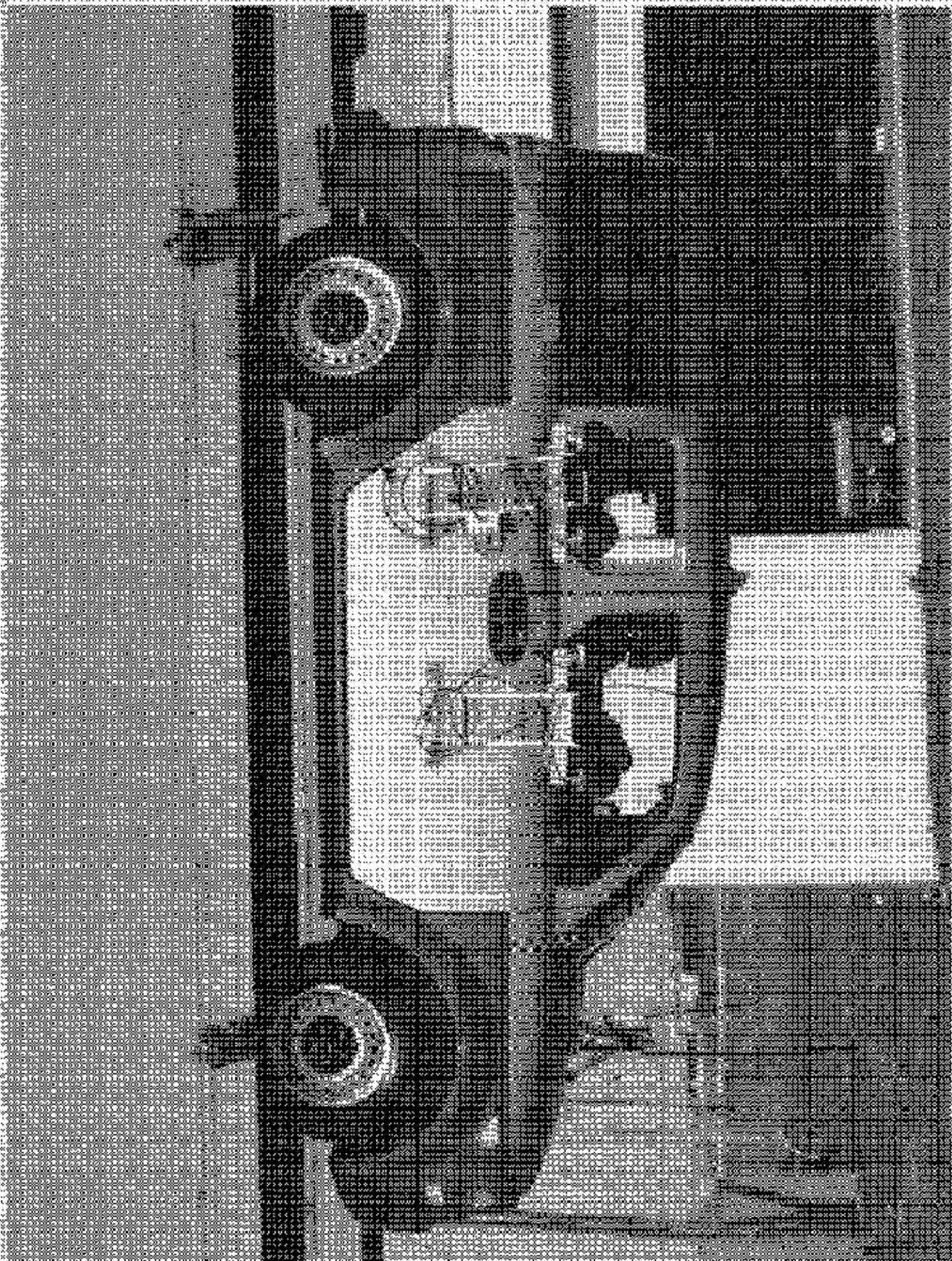


PLATE A-14 ROLL-OVER 180 DEGREES



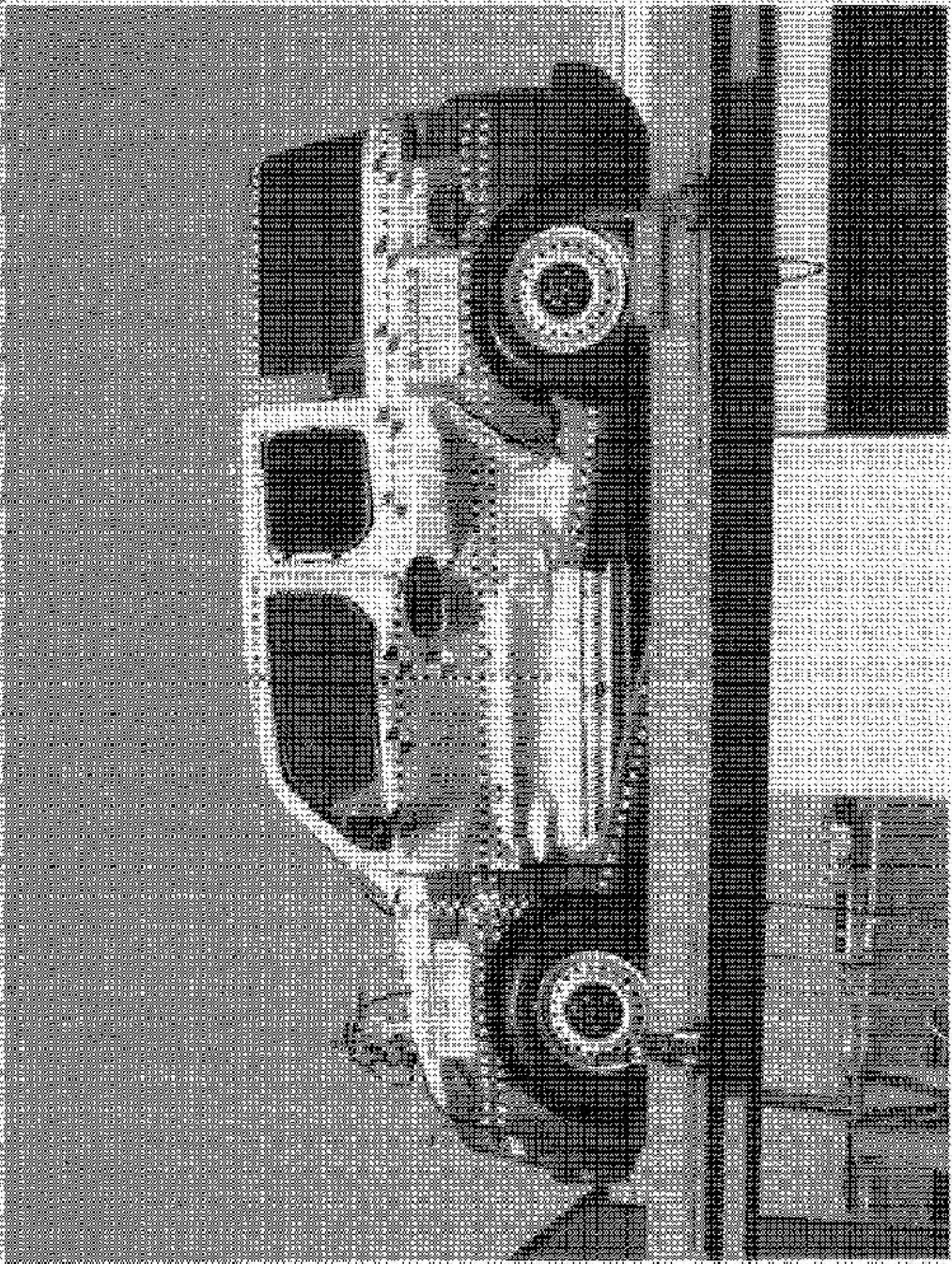


Figure A-6: FOLLOWER 301 FORTIES

APPENDIX B

VEHICLE, MDB AND SID HYBRID III RESPONSE DATA

TABLE OF DATA PLOTS

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION, FORCE AND MOMENT DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180 INTEGRATION DATA - FILTER CLASS 180

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1	DRIVER HEAD 9 ARRAY X ARM (Y) ACCELERATION VS TIME	B- 7
2	DRIVER HEAD 9 ARRAY X ARM (Y) VELOCITY VS TIME	B- 8
3	DRIVER HEAD 9 ARRAY X ARM (Z) ACCELERATION VS TIME	B- 9
4	DRIVER HEAD 9 ARRAY X ARM (Z) VELOCITY VS TIME	B- 10
5	DRIVER HEAD 9 ARRAY Y ARM (X) ACCELERATION VS TIME	B- 11
6	DRIVER HEAD 9 ARRAY Y ARM (X) VELOCITY VS TIME	B- 12
7	DRIVER HEAD 9 ARRAY Y ARM (Z) ACCELERATION VS TIME	B- 13
8	DRIVER HEAD 9 ARRAY Y ARM (Z) VELOCITY VS TIME	B- 14
9	DRIVER HEAD 9 ARRAY Z ARM (X) ACCELERATION VS TIME	B- 15
10	DRIVER HEAD 9 ARRAY Z ARM (X) VELOCITY VS TIME	B- 16
11	DRIVER HEAD 9 ARRAY Z ARM (Y) ACCELERATION VS TIME	B- 17
12	DRIVER HEAD 9 ARRAY Z ARM (Y) VELOCITY VS TIME	B- 18
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14	DRIVER HEAD (X) VELOCITY VS TIME	B- 20
15	DRIVER HEAD (Y) ACCELERATION VS TIME	B- 21
16	DRIVER HEAD (Y) VELOCITY VS TIME	B- 22
17	DRIVER HEAD (Z) ACCELERATION VS TIME	B- 23
18	DRIVER HEAD (Z) VELOCITY VS TIME	B- 24
19	DRIVER HEAD RESULTANT ACCELERATION VS TIME	B- 25
20	DRIVER UPPER NECK (X) FORCE VS TIME	B- 26
21	DRIVER UPPER NECK (Y) FORCE VS TIME	B- 27
22	DRIVER UPPER NECK (Z) FORCE VS TIME	B- 28
23	DRIVER UPPER NECK RESULTANT FORCE VS TIME	B- 29
24	DRIVER UPPER NECK (X) MOMENT VS TIME	B- 30
25	DRIVER UPPER NECK (Y) MOMENT VS TIME	B- 31
26	DRIVER UPPER NECK (Z) MOMENT VS TIME	B- 32
27	DRIVER UPPER NECK RESULTANT MOMENT VS TIME	B- 33
28	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 34
29	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 35
30	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 36
31	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 37
32	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 38
33	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 39
34	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 40
35	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 41

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION, FORCE AND MOMENT DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
36	PASSENGER HEAD 9 ARRAY X ARM (Y) ACCELERATION VS TIME	B- 42
37	PASSENGER HEAD 9 ARRAY X ARM (Y) VELOCITY VS TIME	B- 43
38	PASSENGER HEAD 9 ARRAY X ARM (Z) ACCELERATION VS TIME	B- 44
39	PASSENGER HEAD 9 ARRAY X ARM (Z) VELOCITY VS TIME	B- 45
40	PASSENGER HEAD 9 ARRAY Y ARM (X) ACCELERATION VS TIME	B- 46
41	PASSENGER HEAD 9 ARRAY Y ARM (X) VELOCITY VS TIME	B- 47
42	PASSENGER HEAD 9 ARRAY Y ARM (Z) ACCELERATION VS TIME	B- 48
43	PASSENGER HEAD 9 ARRAY Y ARM (Z) VELOCITY VS TIME	B- 49
44	PASSENGER HEAD 9 ARRAY Z ARM (X) ACCELERATION VS TIME	B- 50
45	PASSENGER HEAD 9 ARRAY Z ARM (X) VELOCITY VS TIME	B- 51
46	PASSENGER HEAD 9 ARRAY Z ARM (Y) ACCELERATION VS TIME	B- 52
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49	PASSENGER HEAD (X) VELOCITY VS TIME	B- 55
50	PASSENGER HEAD (Y) ACCELERATION VS TIME	B- 56
51	PASSENGER HEAD (Y) VELOCITY VS TIME	B- 57
52	PASSENGER HEAD (Z) ACCELERATION VS TIME	B- 58
53	PASSENGER HEAD (Z) VELOCITY VS TIME	B- 59
54	PASSENGER HEAD RESULTANT ACCELERATION VS TIME	B- 60
55	DRIVER UPPER NECK (X) FORCE VS TIME	B- 61
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58	DRIVER UPPER NECK RESULTANT FORCE VS TIME	B- 64
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61	DRIVER UPPER NECK (Z) MOMENT VS TIME	B- 67
62	DRIVER UPPER NECK RESULTANT MOMENT VS TIME	B- 68
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64	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 70
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66	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 72
67	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 73
68	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 74
69	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 75
70	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 76

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION DATA - FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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72	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 78
73	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 79
74	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 80
75	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 81
76	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 82
77	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 83
78	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 84

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
79	RIGHT SIDE SILL AT FRONT SEAT (X) ACCELERATION VS TIME	B- 85
80	RIGHT SIDE SILL AT FRONT SEAT (X) VELOCITY VS TIME	B- 86
81	RIGHT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 87
82	RIGHT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 88
83	RIGHT SIDE SILL AT FRONT SEAT (Z) ACCELERATION VS TIME	B- 89
84	RIGHT SIDE SILL AT FRONT SEAT (Z) VELOCITY VS TIME	B- 90
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86	RIGHT SIDE SILL AT REAR SEAT (X) ACCELERATION VS TIME	B- 92
87	RIGHT SIDE SILL AT REAR SEAT (X) VELOCITY VS TIME	B- 93
88	RIGHT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 94
89	RIGHT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 95
90	RIGHT SIDE SILL AT REAR SEAT (Z) ACCELERATION VS TIME	B- 96
91	RIGHT SIDE SILL AT REAR SEAT (Z) VELOCITY VS TIME	B- 97
92	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION VS TIME	B- 98
93	REAR FLOORPAN ABOVE AXLE (X) ACCELERATION VS TIME	B- 99
94	REAR FLOORPAN ABOVE AXLE (X) VELOCITY VS TIME	B- 100
95	REAR FLOORPAN ABOVE AXLE (Y) ACCELERATION VS TIME	B- 101
96	REAR FLOORPAN ABOVE AXLE (Y) VELOCITY VS TIME	B- 102
97	REAR FLOORPAN ABOVE AXLE (Z) ACCELERATION VS TIME	B- 103
98	REAR FLOORPAN ABOVE AXLE (Z) VELOCITY VS TIME	B- 104
99	REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION VS TIME	B- 105
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101	LEFT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 107
102	LEFT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 108
103	LEFT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 109
104	RIGHT REAR OCCUPANT COMPARTMENT (Y) ACCELERATION VS TIME	B- 110
105	RIGHT REAR OCCUPANT COMPARTMENT (Y) VELOCITY VS TIME	B- 111
106	LOWER B-POST (Y) ACCELERATION VS TIME	B- 112
107	LOWER B-POST (Y) VELOCITY VS TIME	B- 113
108	UPPER B-POST (Y) ACCELERATION VS TIME	B- 114
109	UPPER B-POST (Y) VELOCITY VS TIME	B- 115
110	LOWER A-POST (Y) ACCELERATION VS TIME	B- 116
111	LOWER A-POST (Y) VELOCITY VS TIME	B- 117
112	UPPER A-POST (Y) ACCELERATION VS TIME	B- 118
113	UPPER A-POST (Y) VELOCITY VS TIME	B- 119
114	FRONT SEAT TRACK (Y) ACCELERATION VS TIME	B- 120
115	FRONT SEAT TRACK (Y) VELOCITY VS TIME	B- 121
116	REAR SEAT TRACK (Y) ACCELERATION VS TIME	B- 122
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TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
118	VEHICLE CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 124
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120	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 126
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122	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 128
123	VEHICLE CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 129
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MDB INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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126	MDB CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 132
127	MDB CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 133
128	MDB CENTER OF GRAVITY (Y) VELOCITY VS TIME	B- 134
129	MDB CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 135
130	MDB CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 136
131	MDB CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 137
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134	MDB REAR (Y) ACCELERATION VS TIME	B- 140
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DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
136	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 142
137	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 143
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142	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 148
143	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 149
144	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 150
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149	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 155
150	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 156
151	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 157

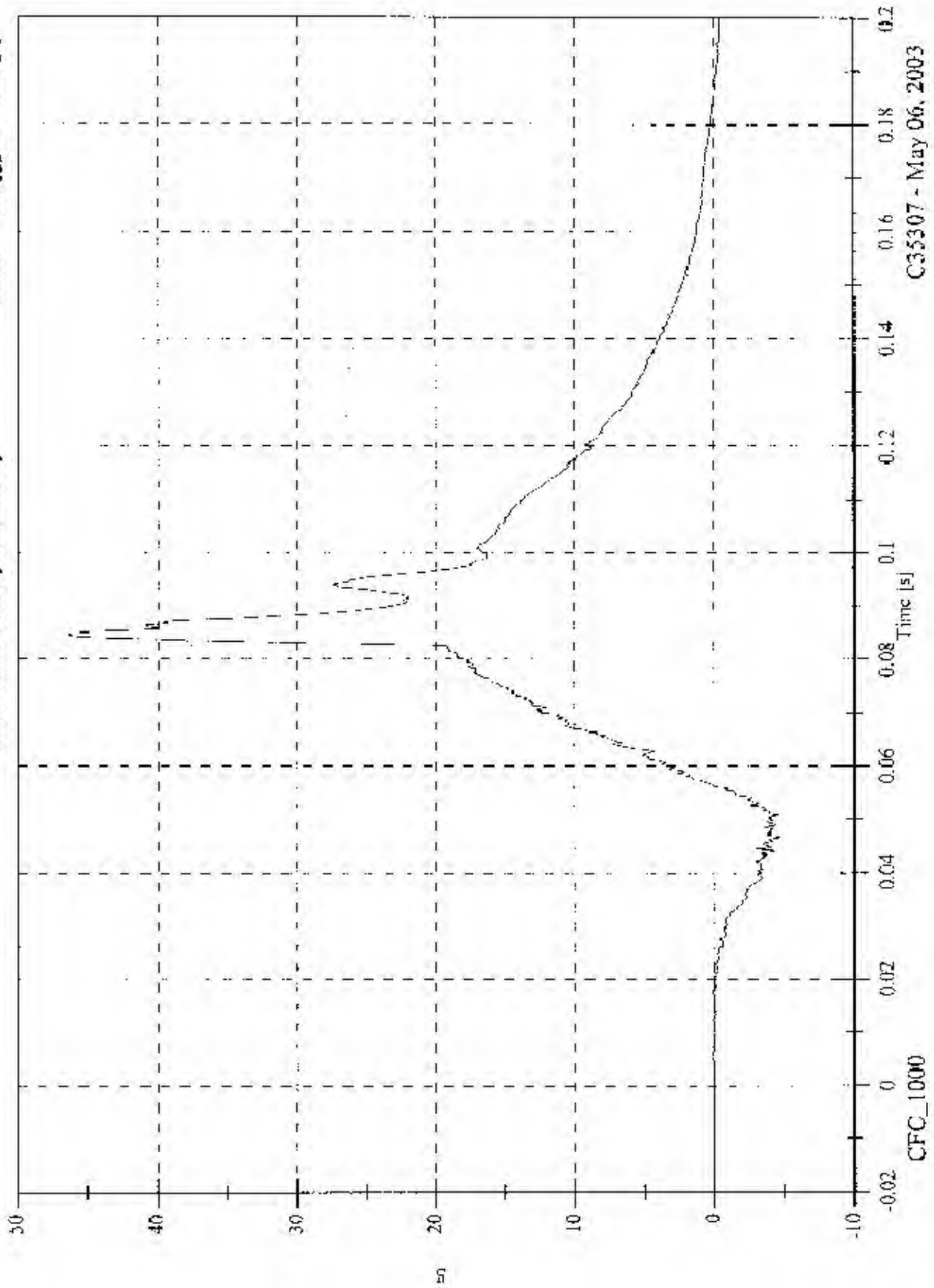
DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
152	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 158
153	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 159
154	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 160
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158	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 164
159	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 165

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 46.4 [g] at 0.085 [s]
Min: -4.8 [g] at 0.047 [s]

V2P1 Head 9 Array X Arm Ay

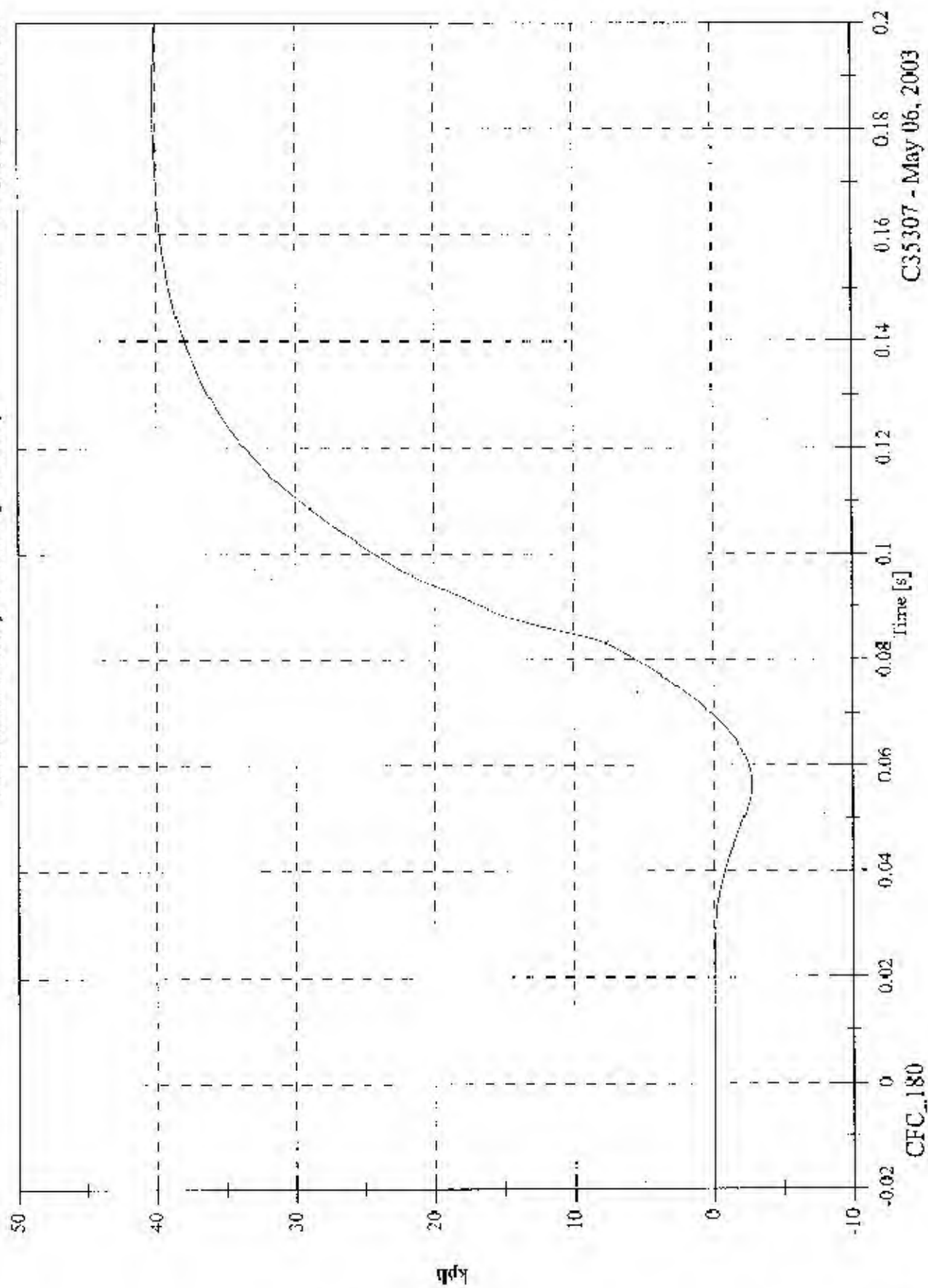


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Ay Velocity

Max: 40.2 [kph] at 0.184 [s]
Min: -2.7 [kph] at 0.056 [s]

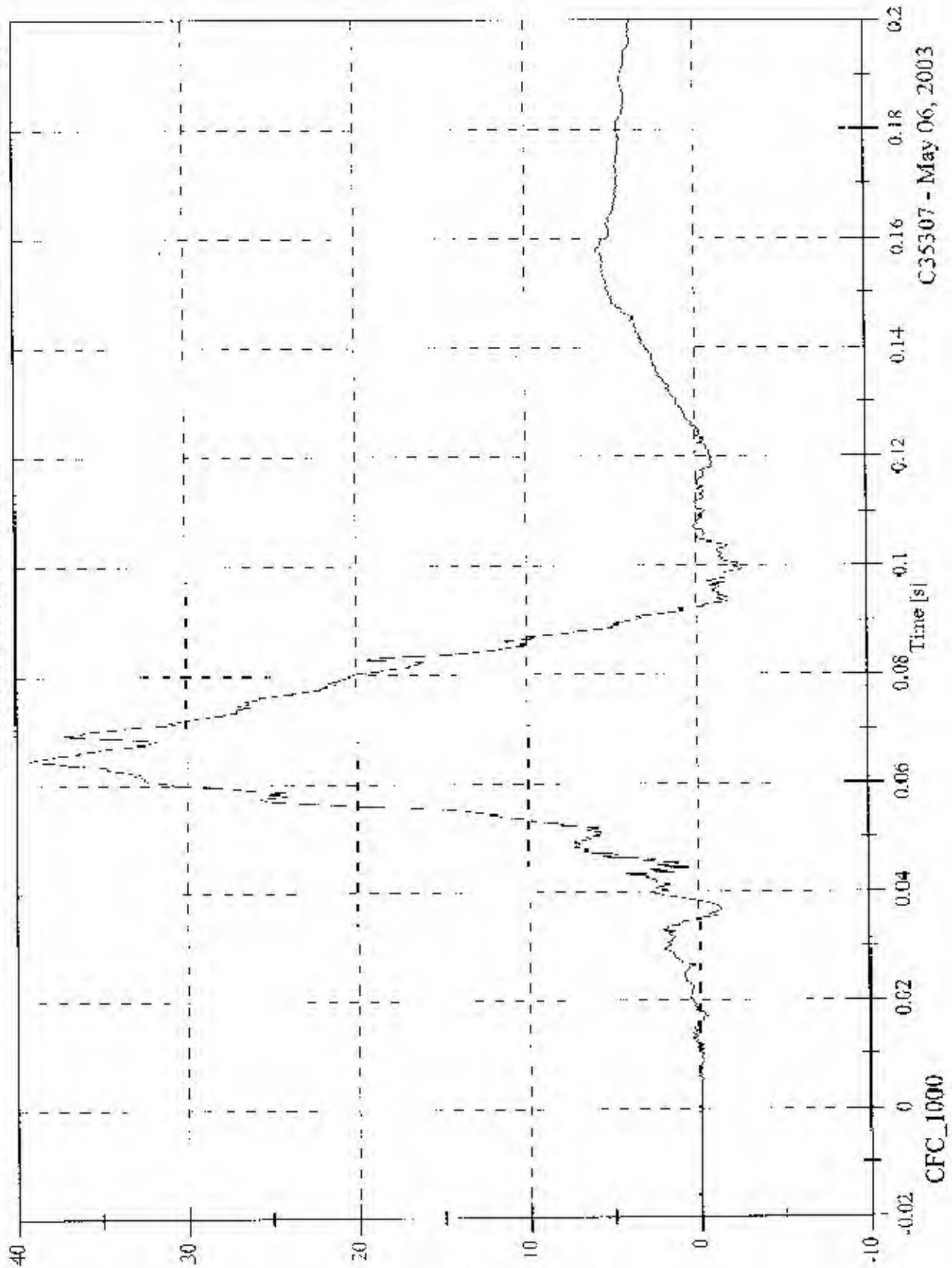


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Az

Max: 39.2 [g] at 0.064 [s]
Min: -2.6 [g] at 0.099 [s]

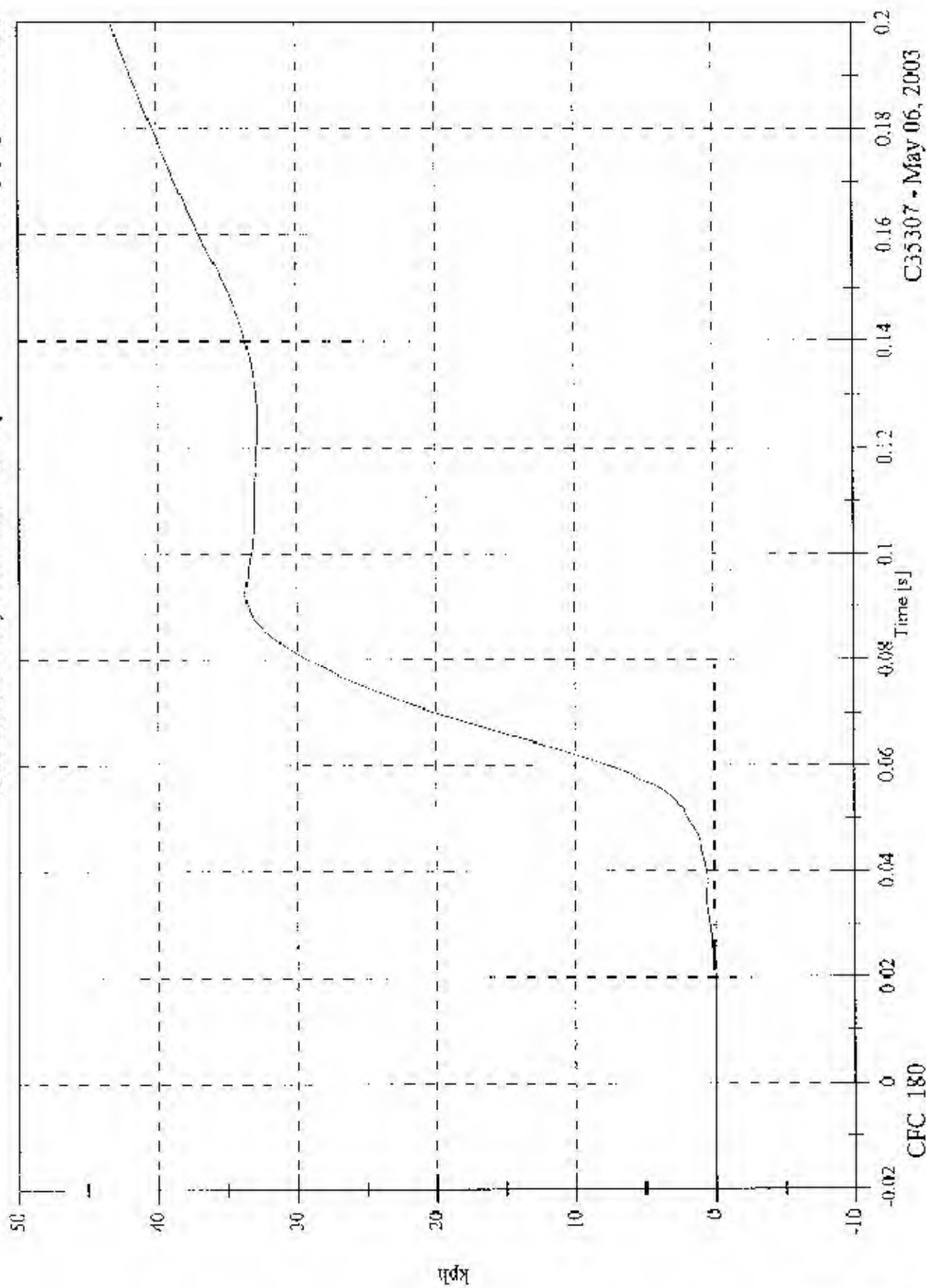


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2003 FNVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Az Velocity

Max: 43.2 [kph] at 0.200 [s]
Min: -0.0 [kph] at 0.012 [s]



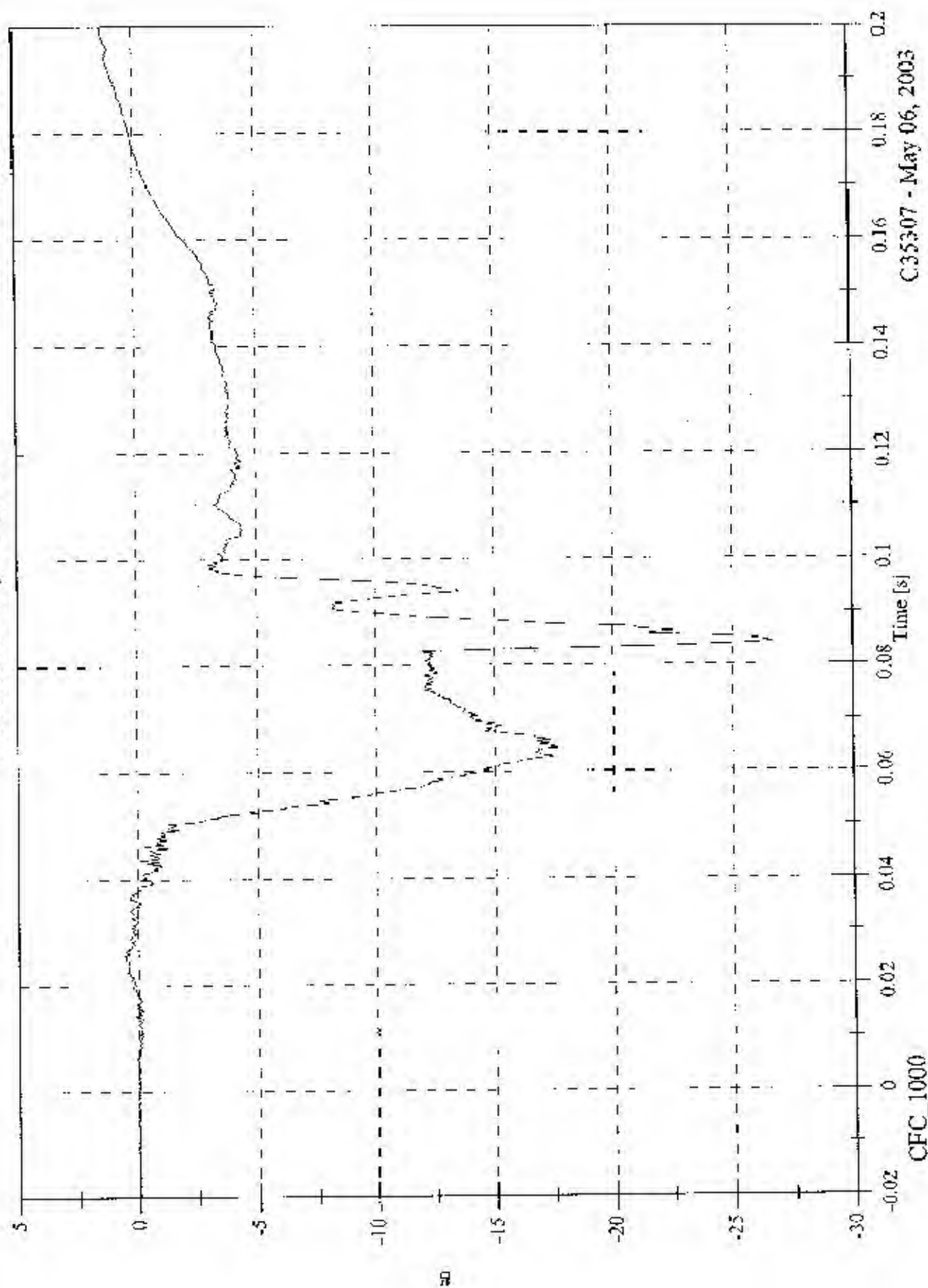
CFC_180

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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Y Arm Ax

M(ax): 1.3 [g] at 0.200 [s]
M(in): -26.7 [g] at 0.084 [s]

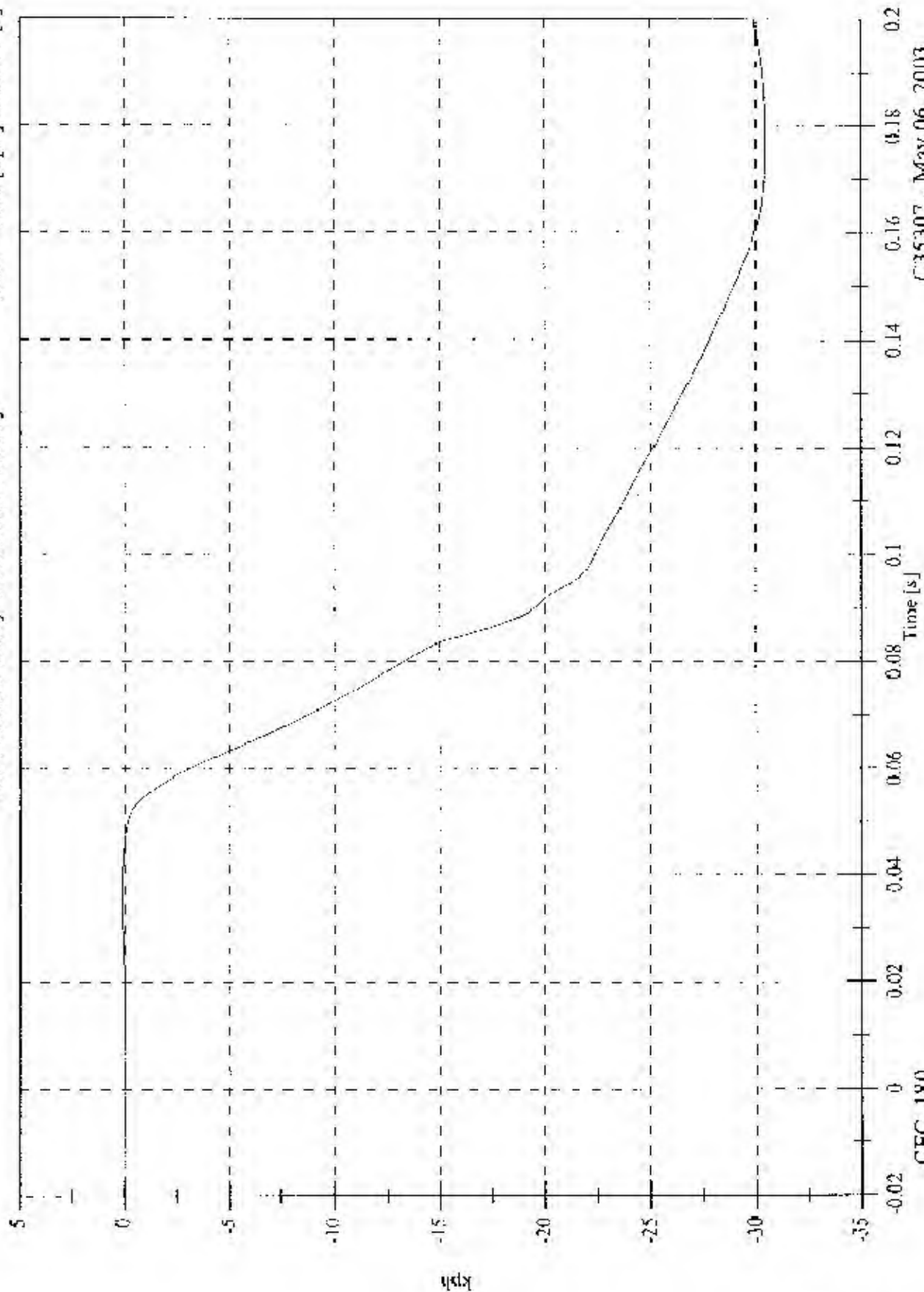


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Y Arm Ax Velocity

Max: 0.1 [kph] at 0.038 [s]
Min: -30.5 [kph] at 0.177 [s]

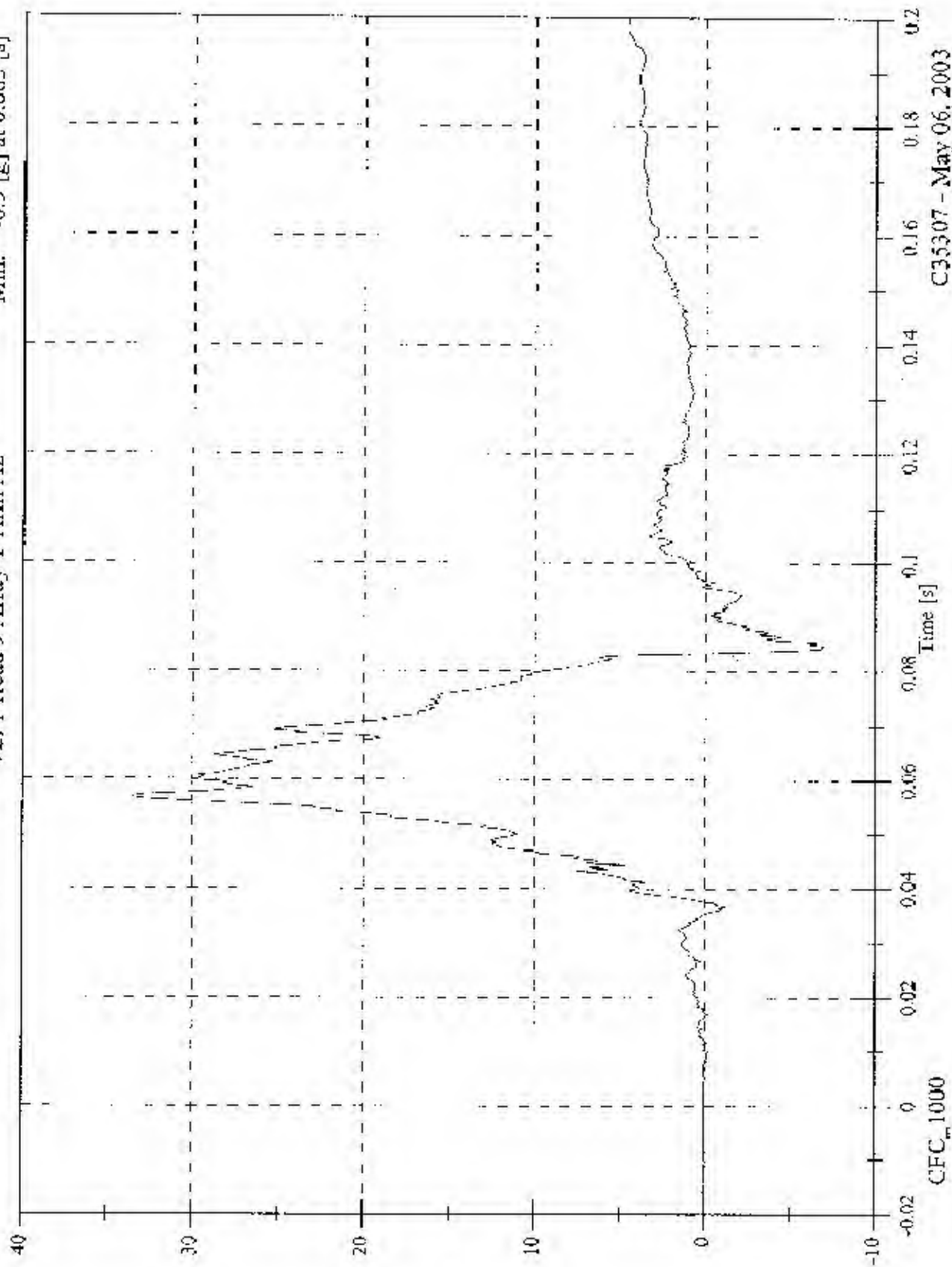


CFC_180

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Max: 33.6 [g] at 0.057 [s]
Min: -6.9 [g] at 0.085 [s]

V2P1 Head 9 Array Y Arm Az

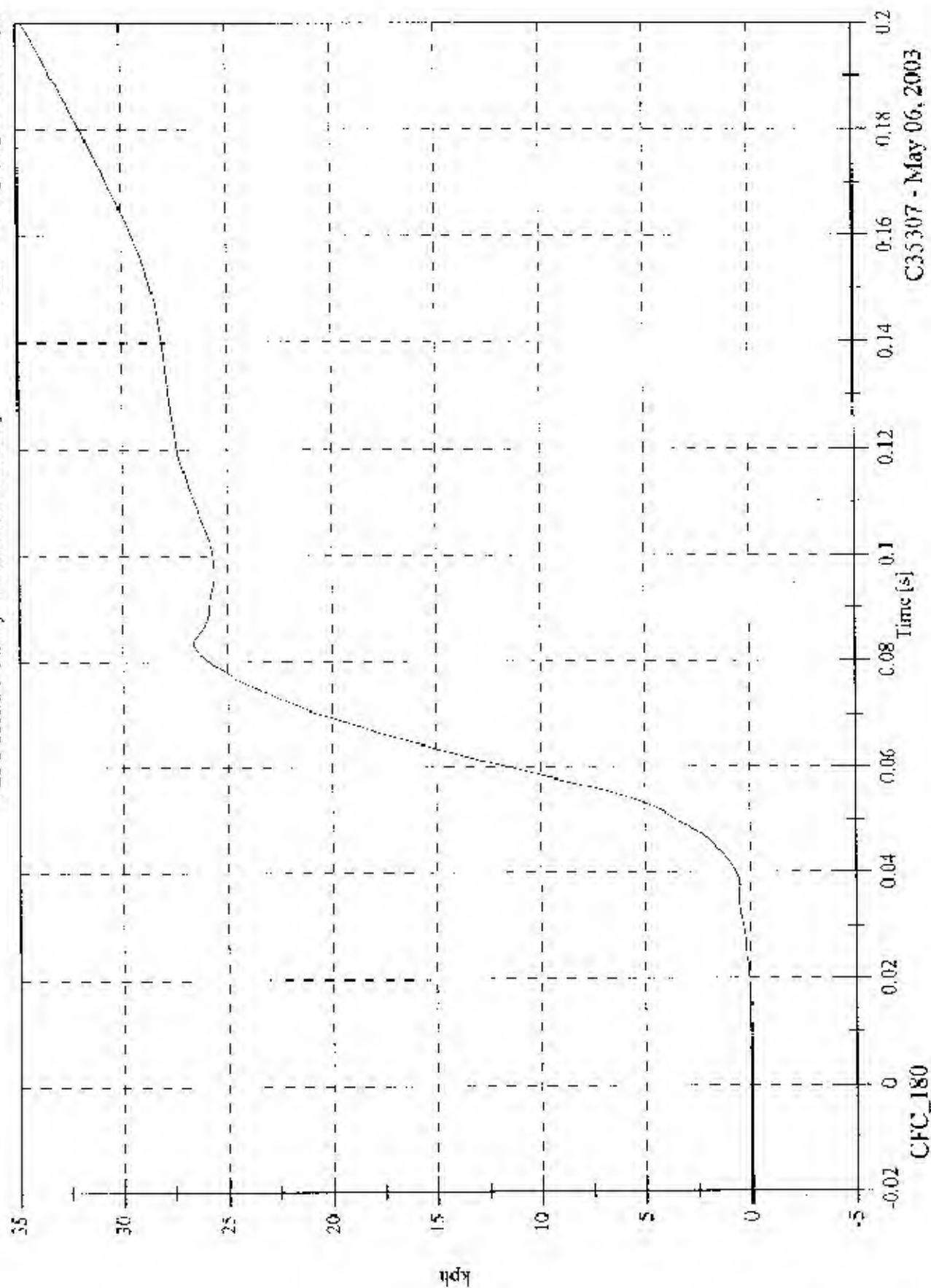


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Y Arm Az Velocity

Max: 34.8 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.018 [s]

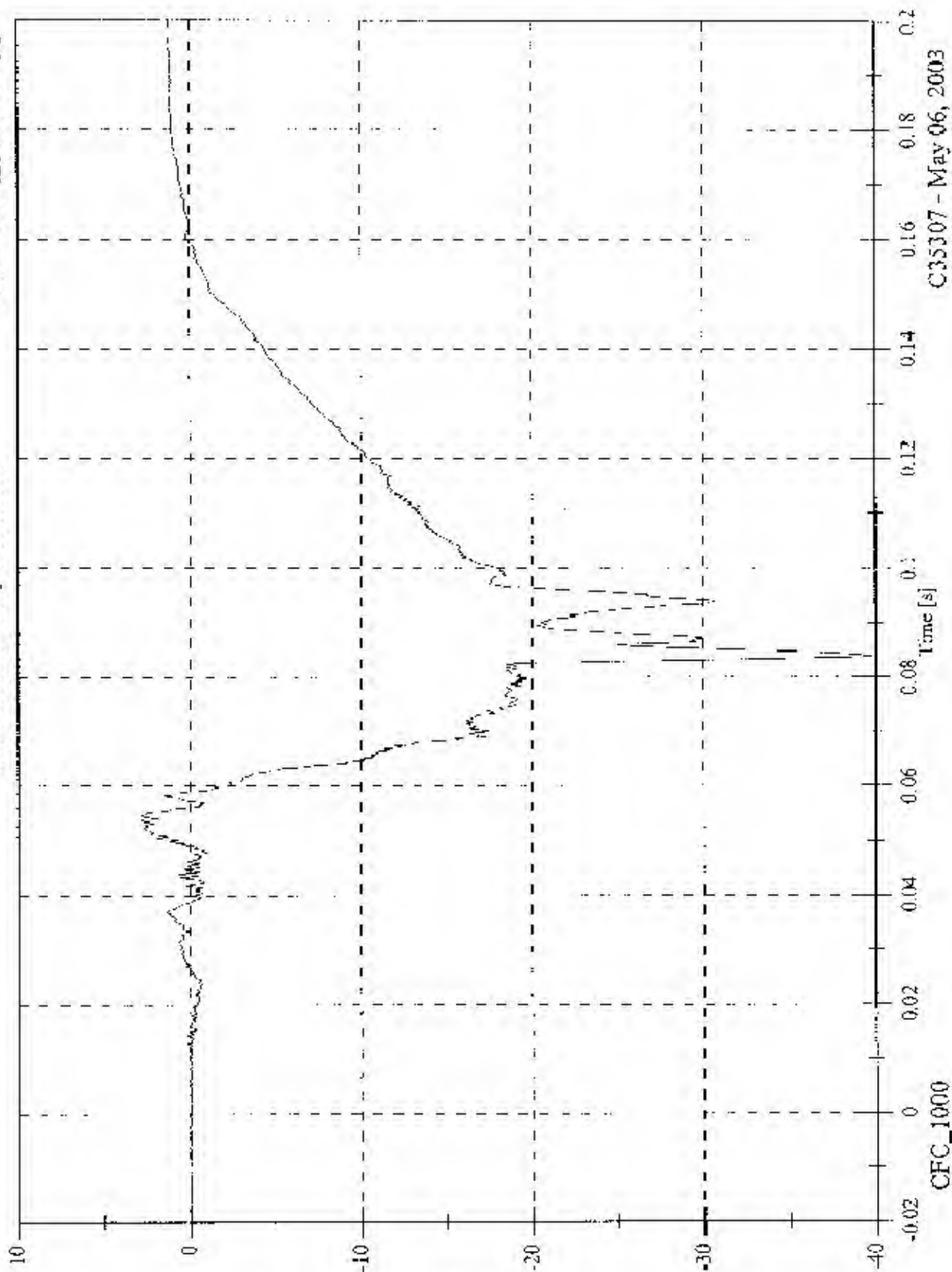


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Arm Ax

Max: 2.8 [g] at 0.055 [s]
Min: -39.8 [g] at 0.084 [s]

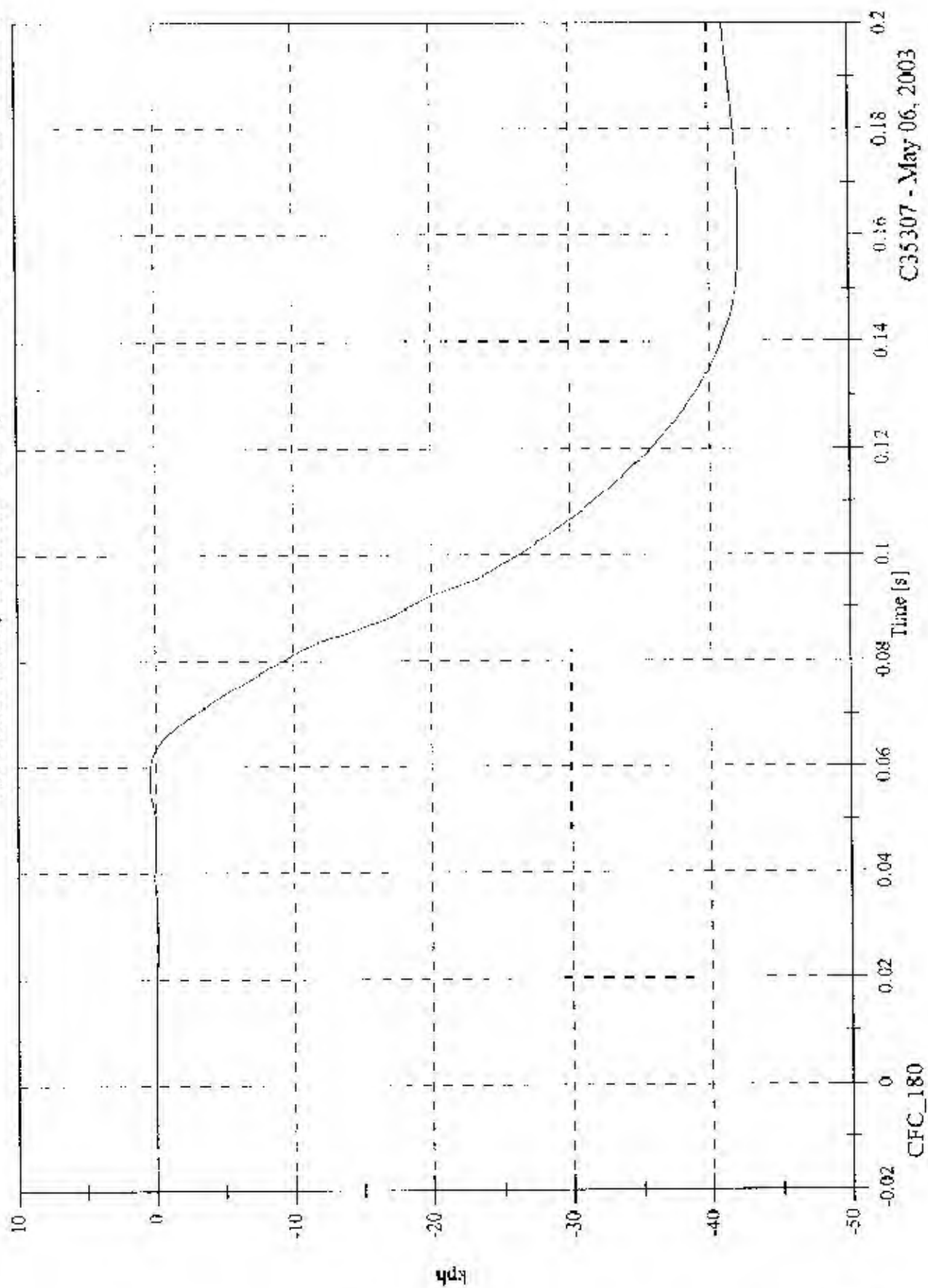


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Arm Ax Velocity

Max: 0.5 [kph] at 0.059 [s]
Min: -42.2 [kph] at 0.159 [s]

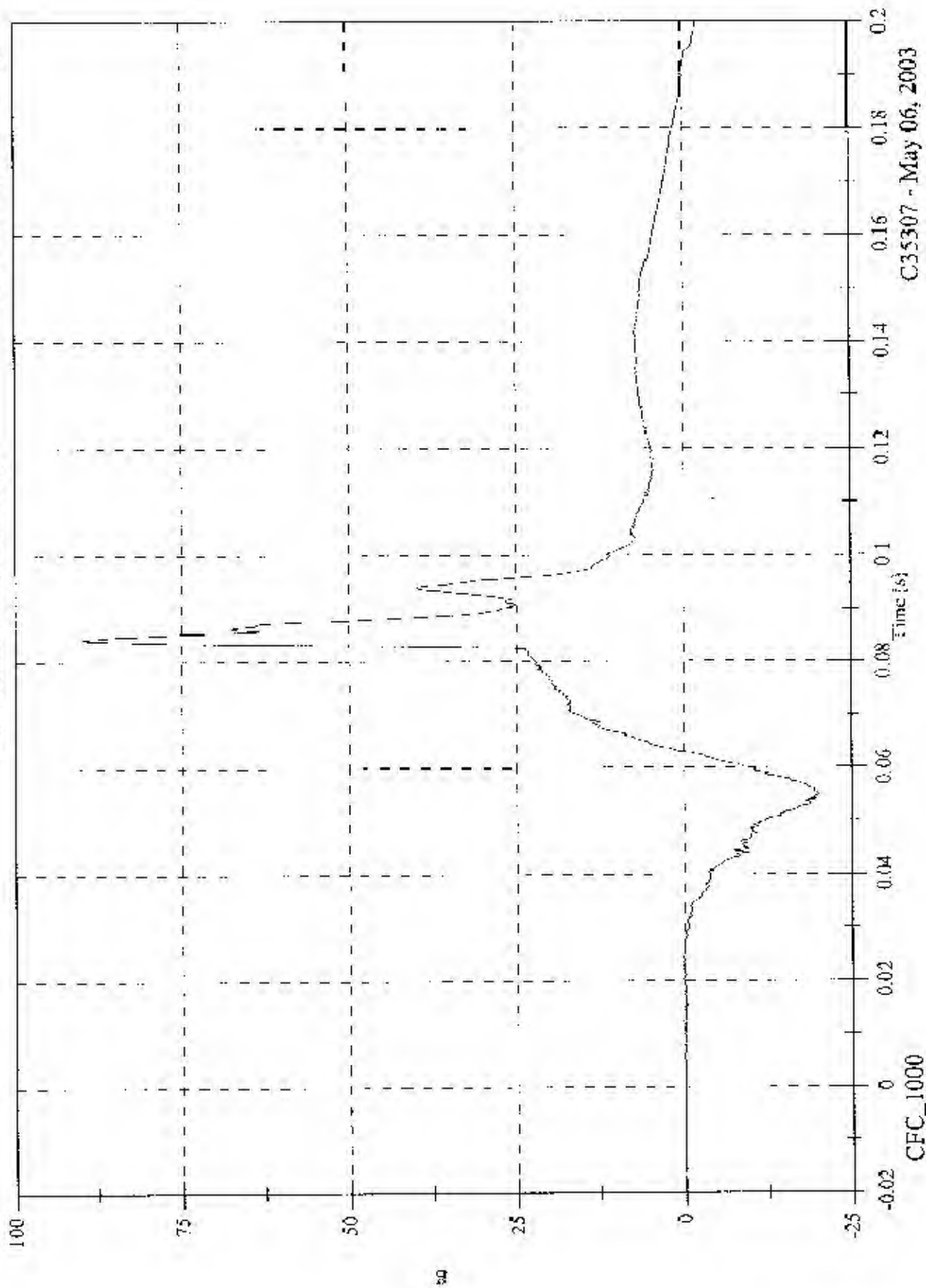


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Aim Ay

Max: 90.0 [g] at 0.084 [s]
Min: -20.0 [g] at 0.055 [s]

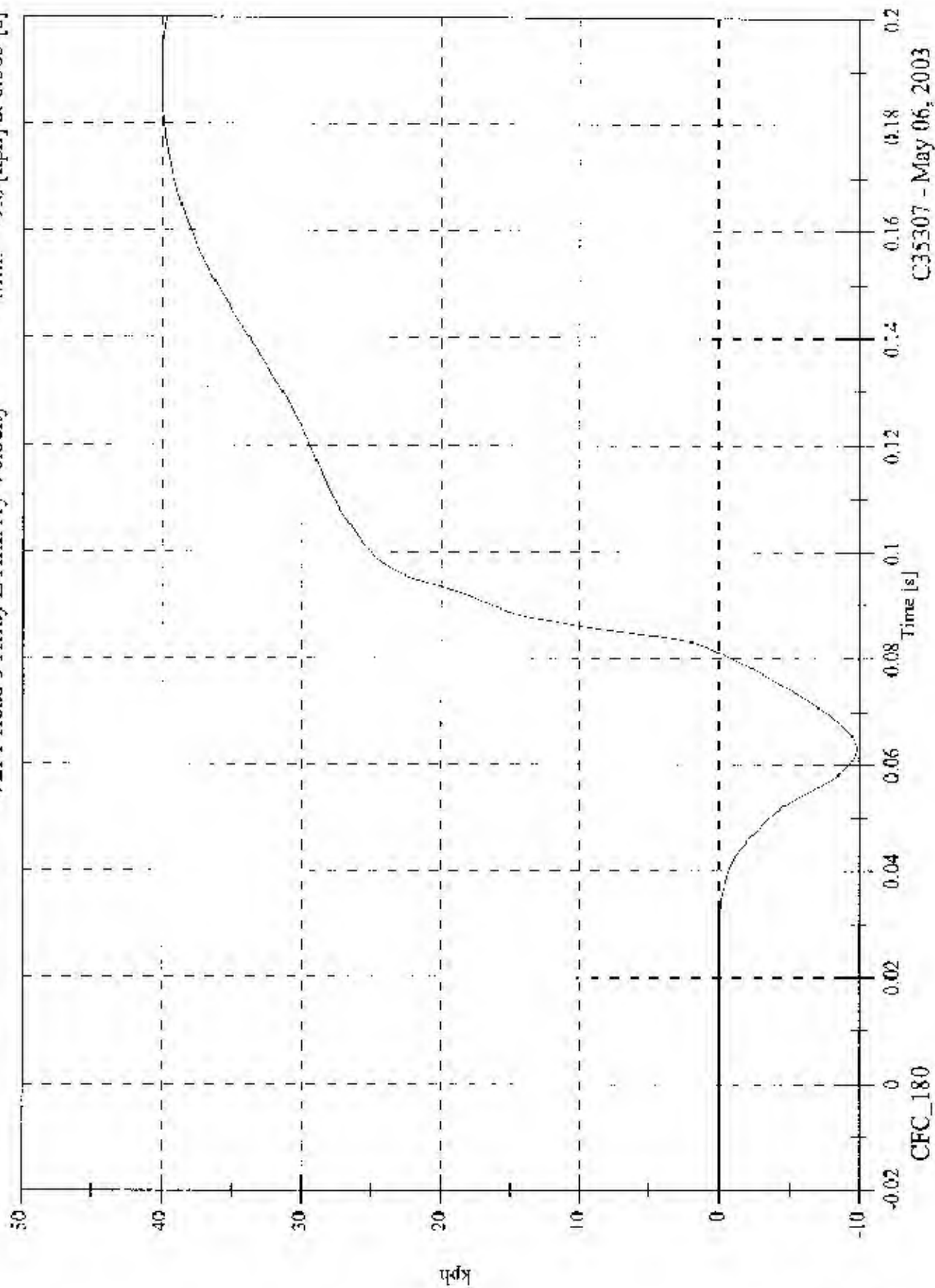


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Arm Ay Velocity

Max: 40.0 [kph] at 0.190 [s]
Min: -9.8 [kph] at 0.063 [s]

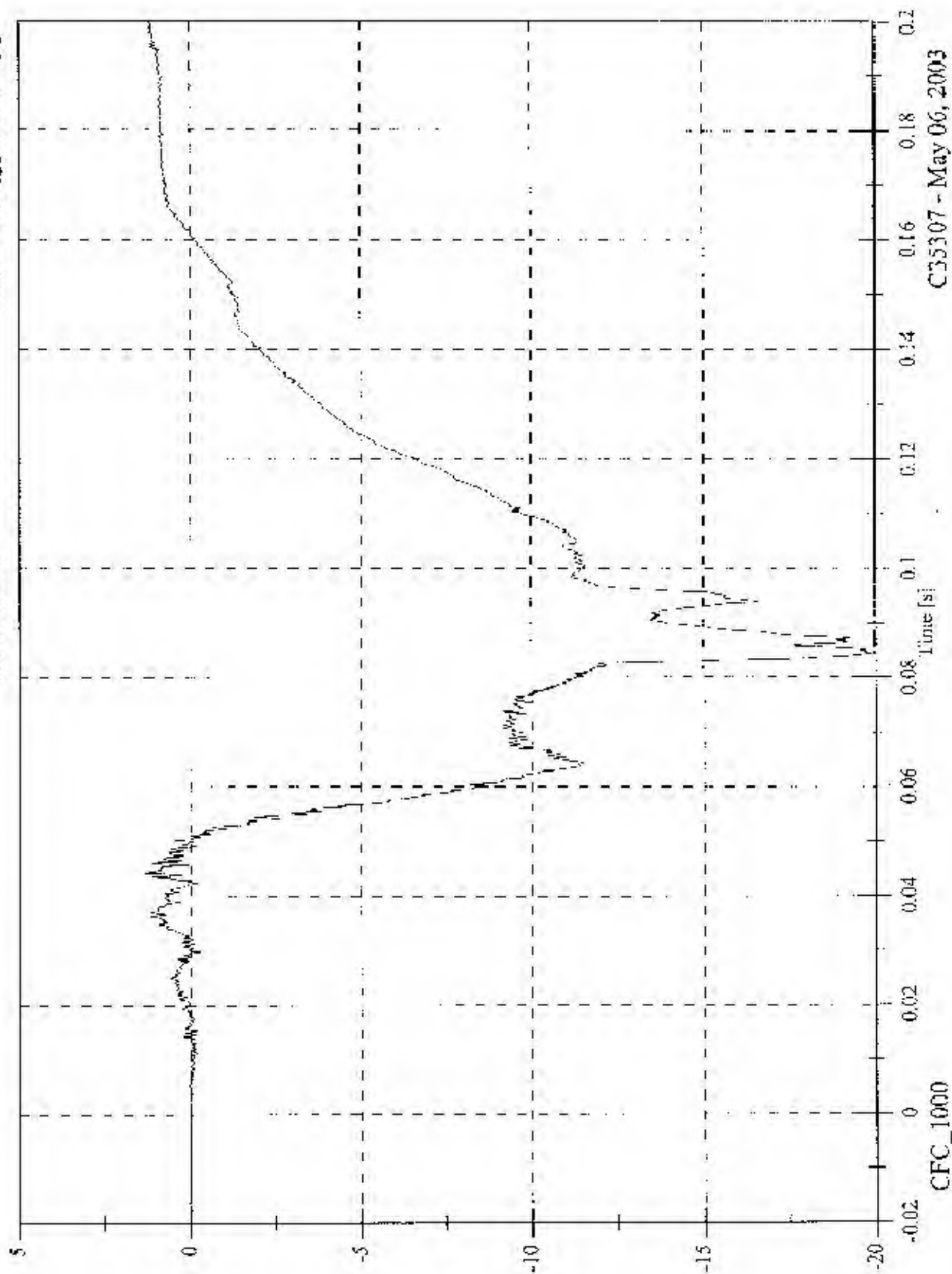


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Max: 1.3 [g] at 0.044 [s]
Min: -19.9 [g] at 0.084 [s]

V2PI Head x



CFC_1000

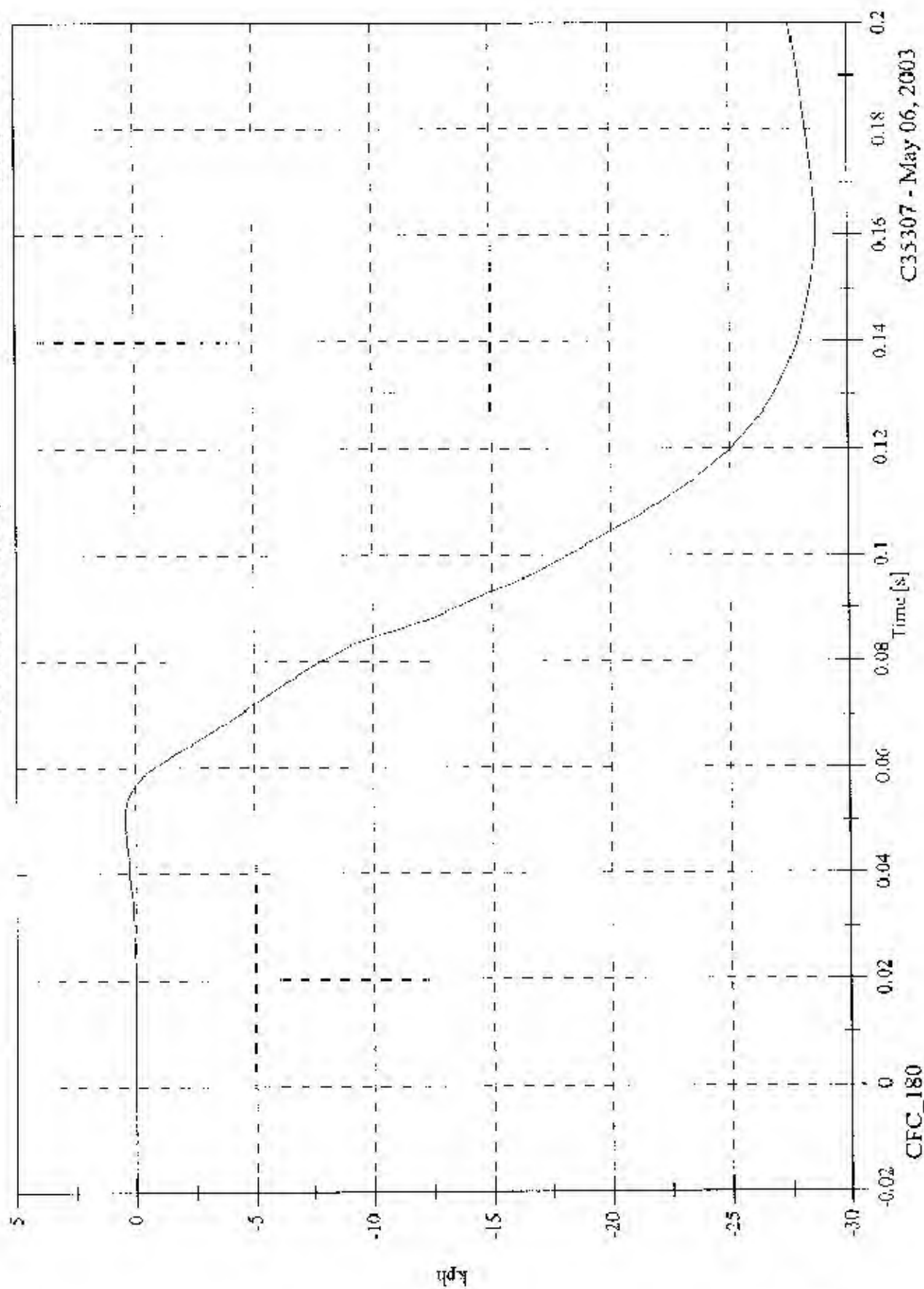
Time [s]

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Max: 0.4 [kph] at 0.050 [s]
 Min: -28.7 [kph] at 0.161 [s]

V2P1 Head x Velocity

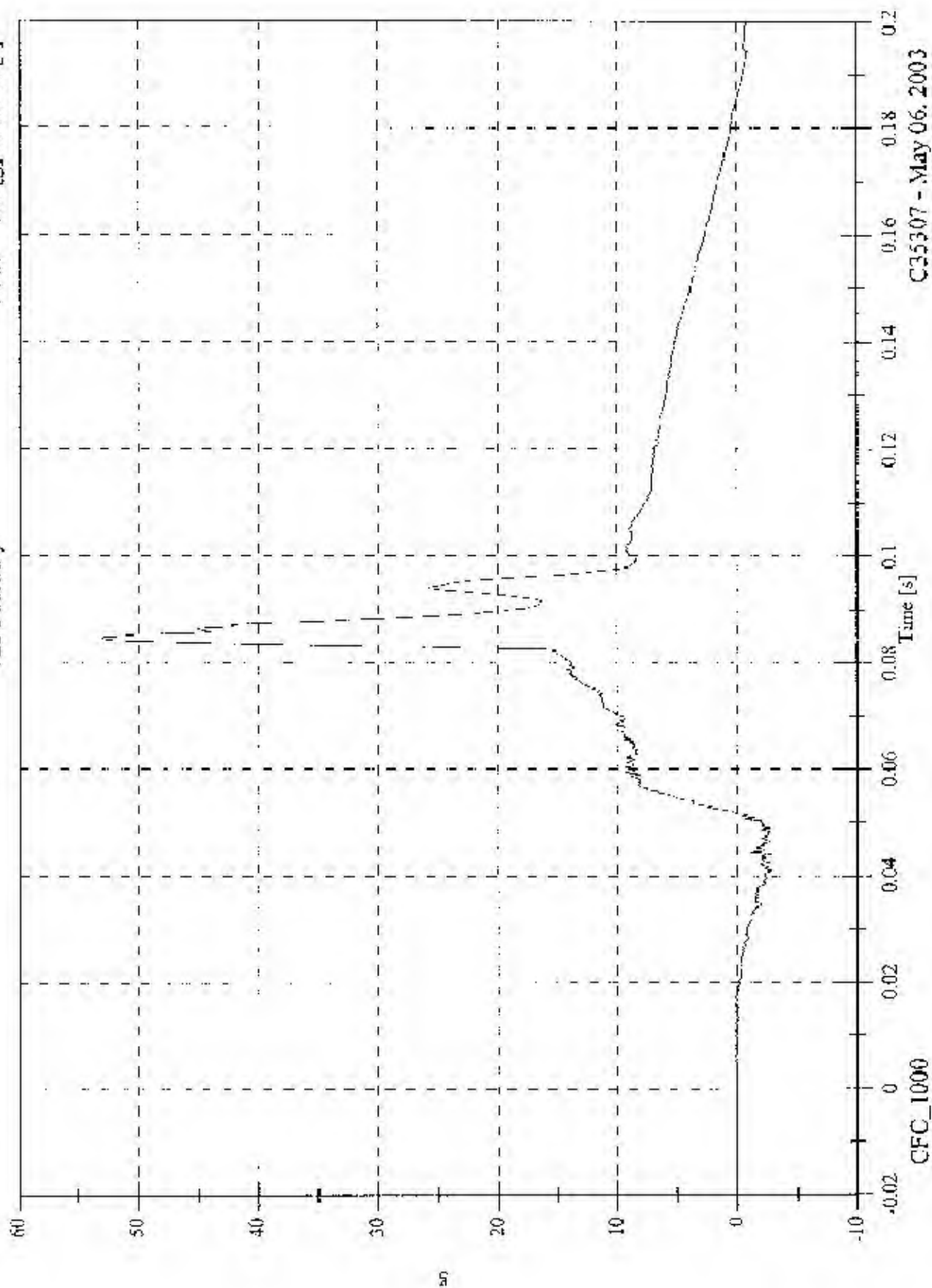


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Max: 53.1 [g] at 0.085 [s]
Min: -2.8 [g] at 0.044 [s]

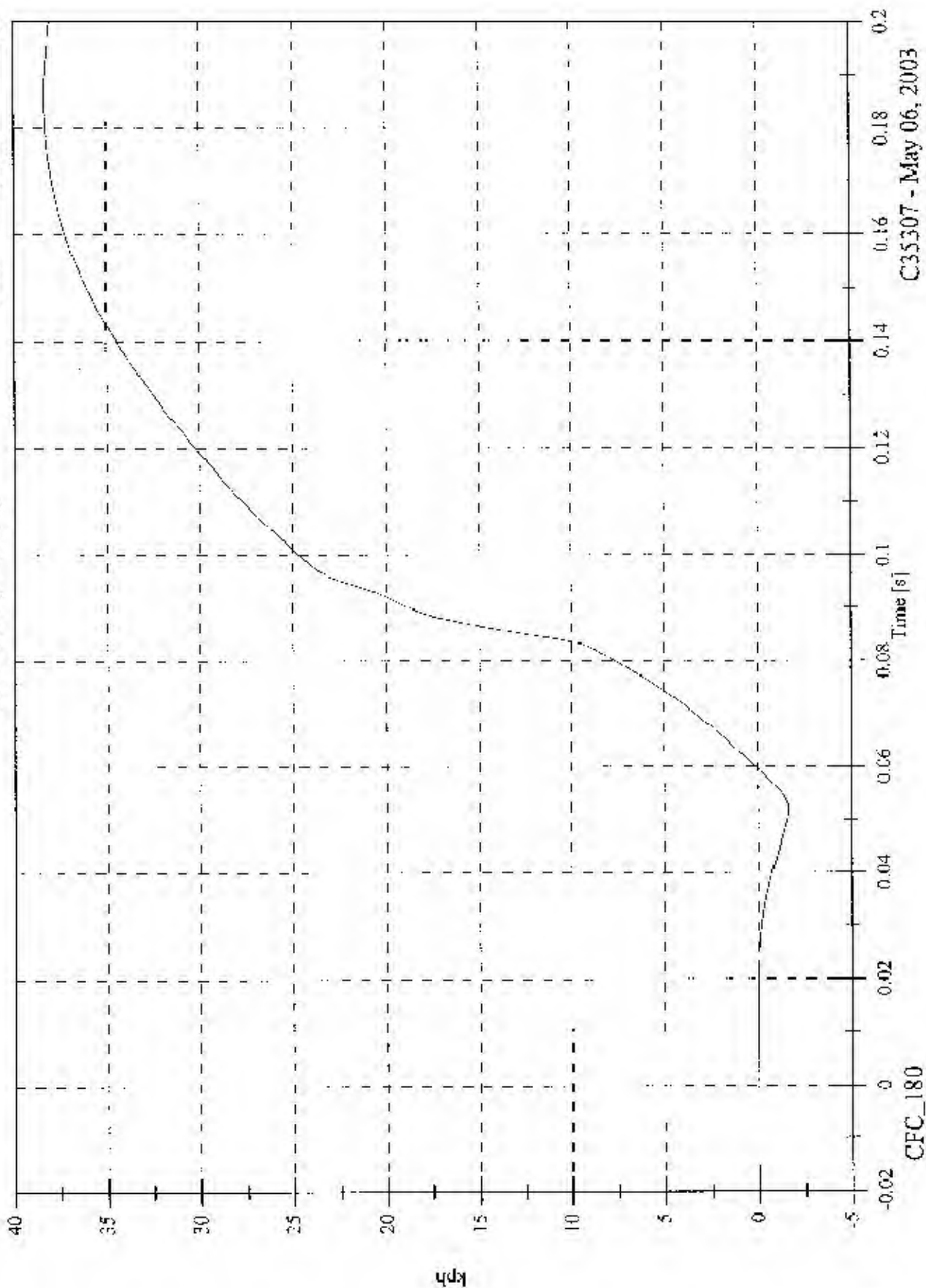
V2P1 Head y



2003 FMVSS 214D Test 8 2003 Honda Element

Max: 38.4 [kph] at 0.185 [s]
 Min: -1.6 [kph] at 0.052 [s]

V2P1 Head y Velocity

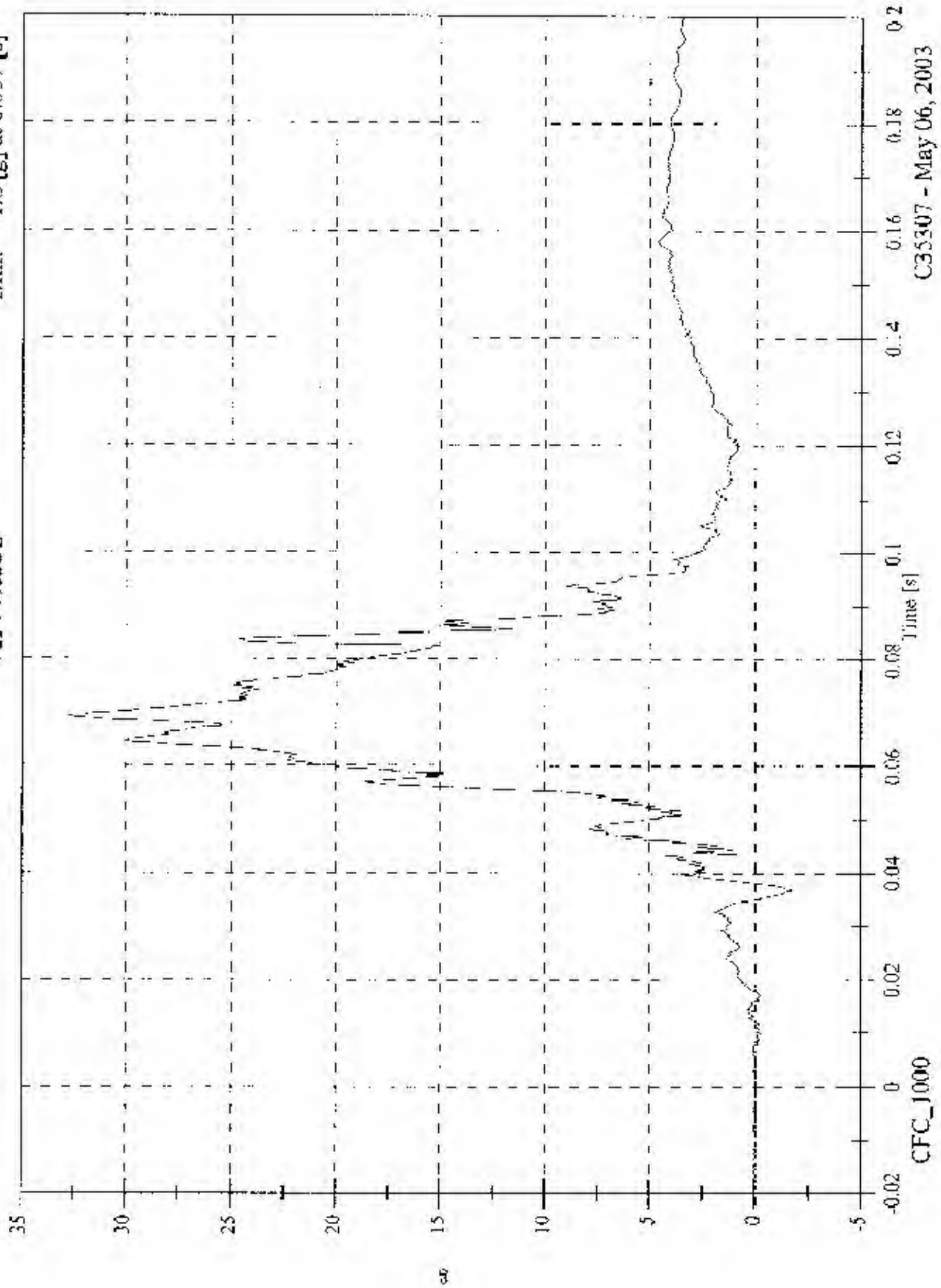


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 32.8 [g] at 0.069 [s]
Min: -1.8 [g] at 0.037 [s]

V2PI Head z

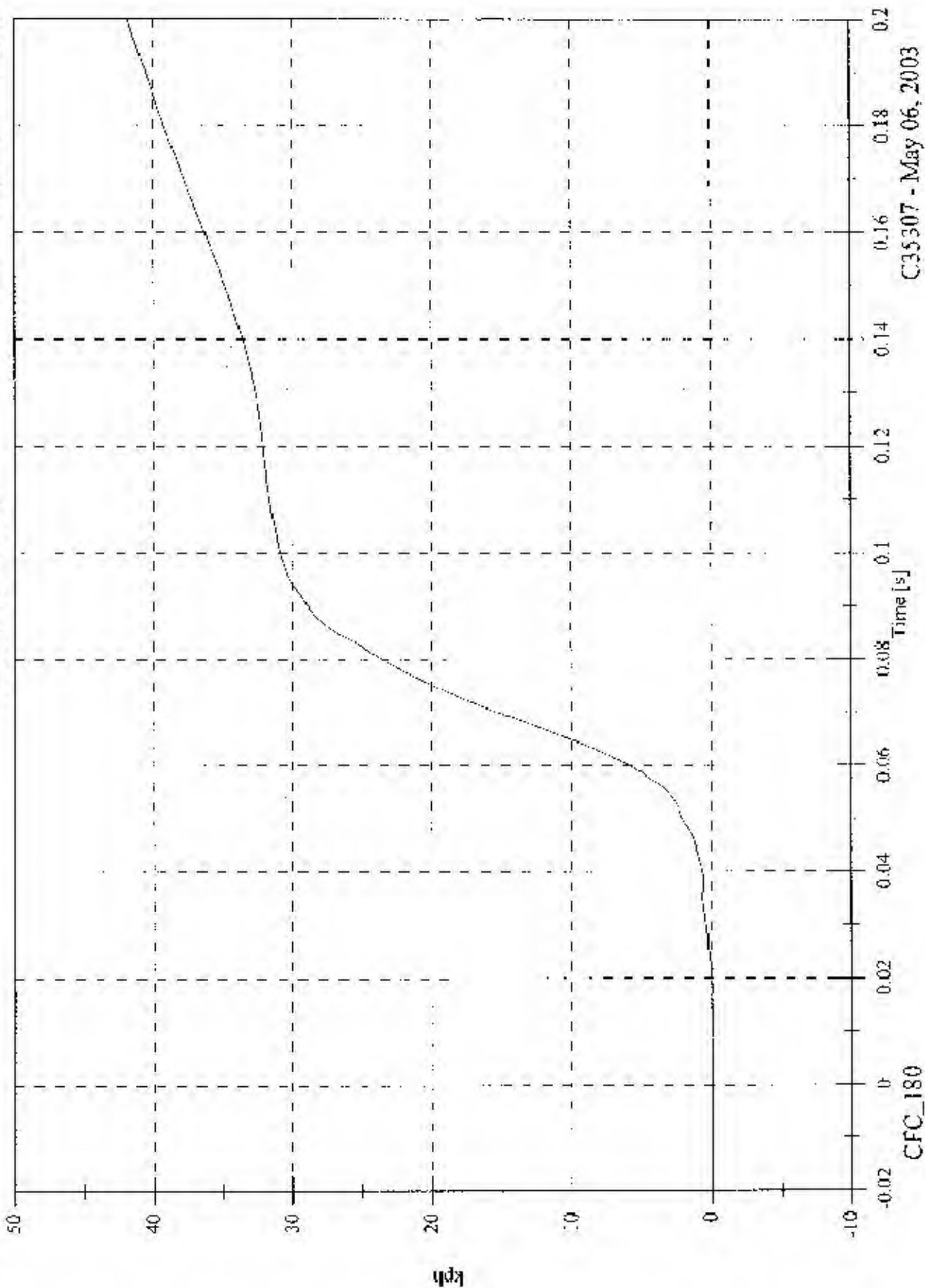


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head z Velocity

Max: 41.8 [kph] at 0.200 [s]
Min: -0.0 [kph] at 0.012 [s]



CFC_180

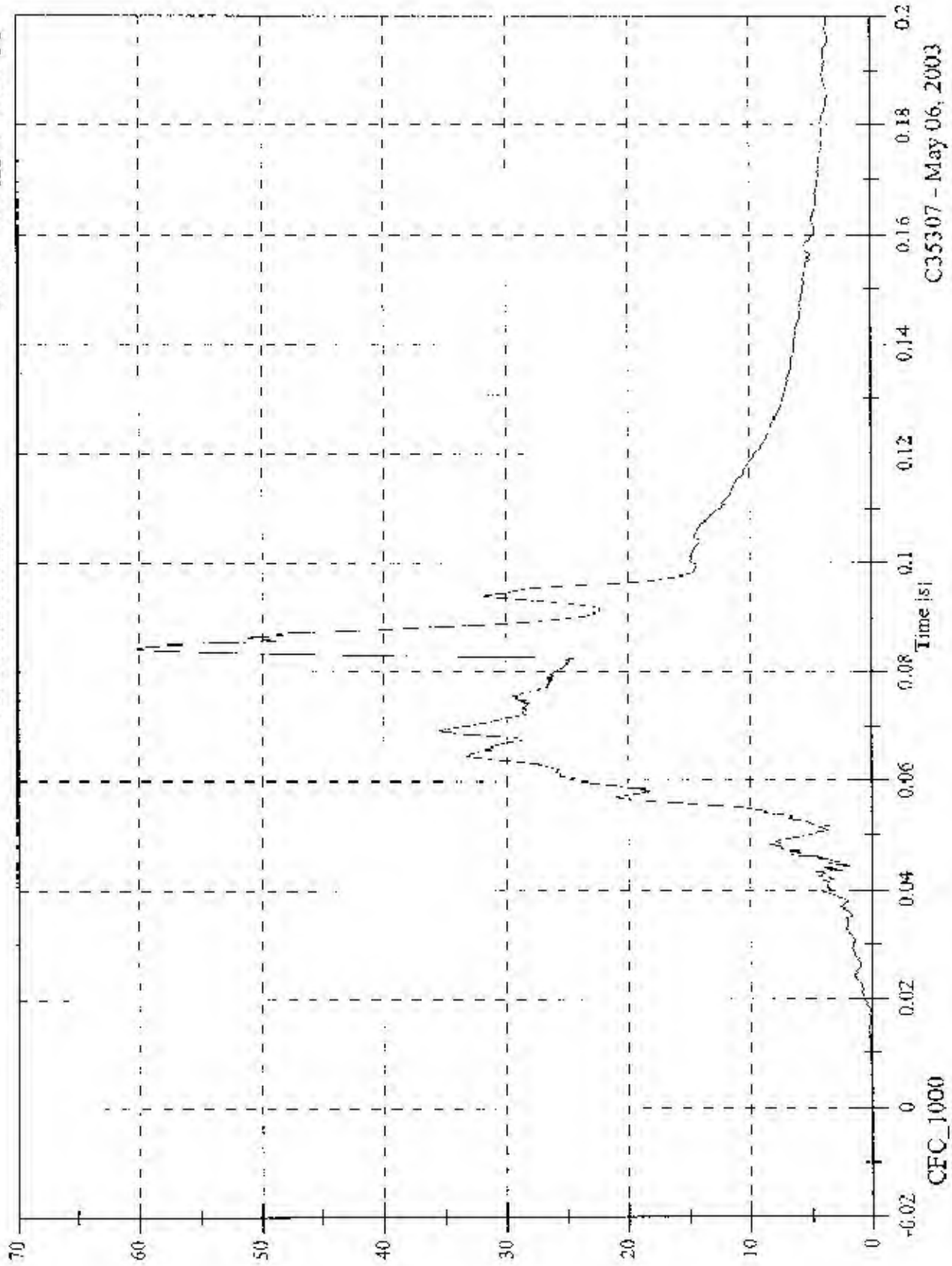
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 60.3 [g] at 0.084 [s]

Min: 0.0 [g] at -0.015 [s]

V2P1 Head Resultant

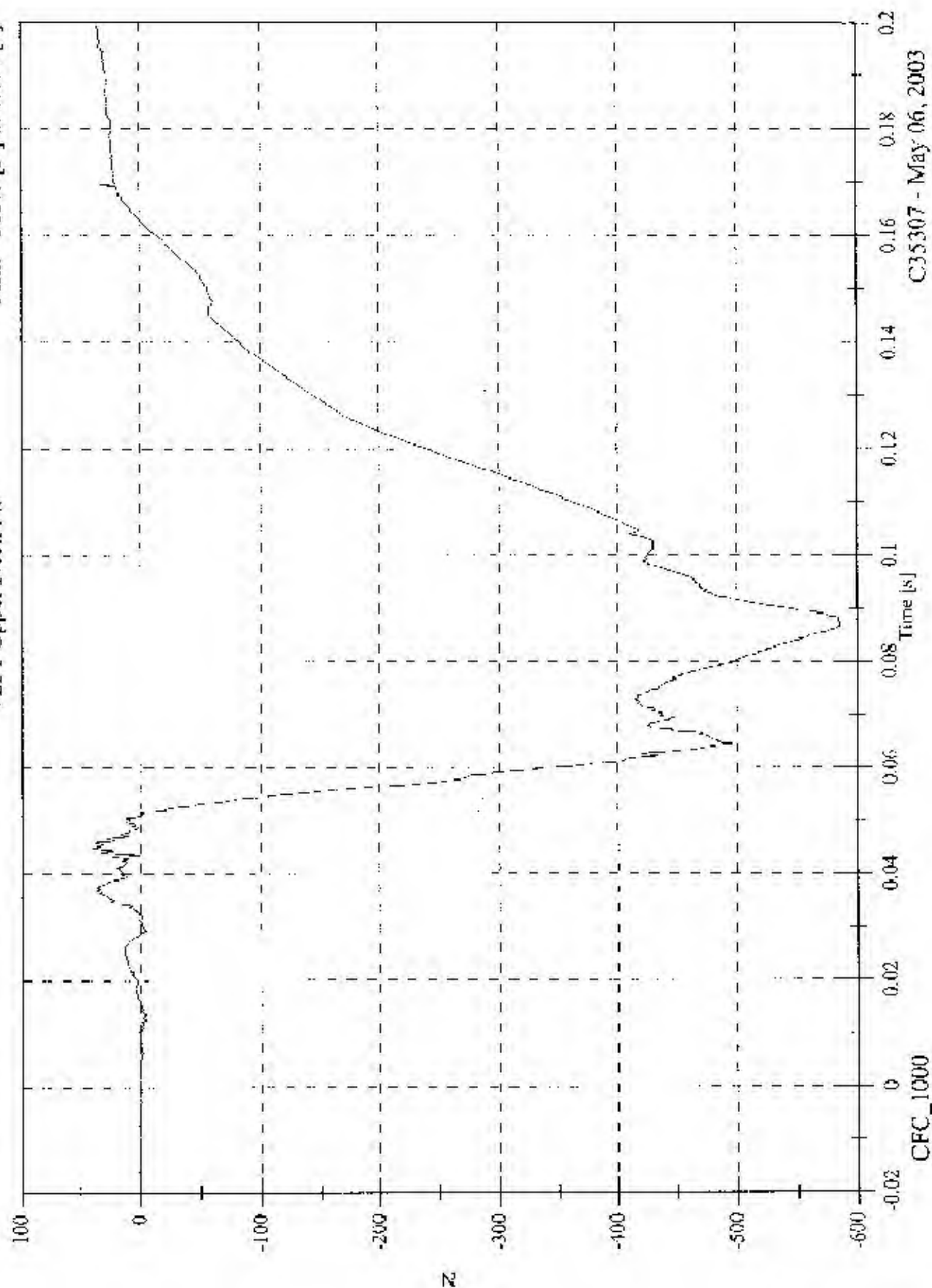


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Upper Neck Fx

Max: 40.3 [N] at 0.045 [s]
Min: -585.6 [N] at 0.087 [s]

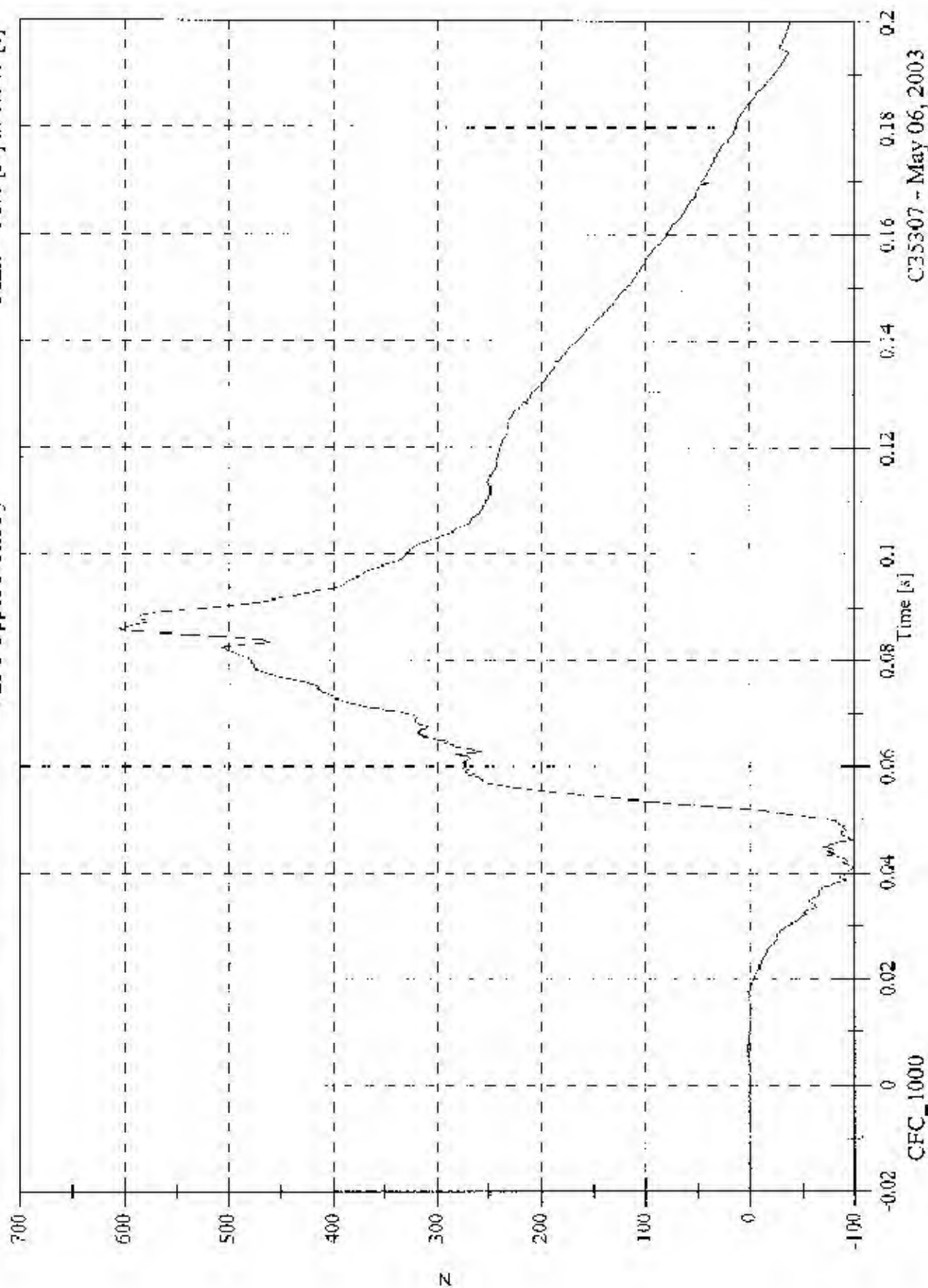


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Max: 605.4 [N] at 0.086 [s]
Min: -98.6 [N] at 0.041 [s]

V2P1 Upper Neck Fy

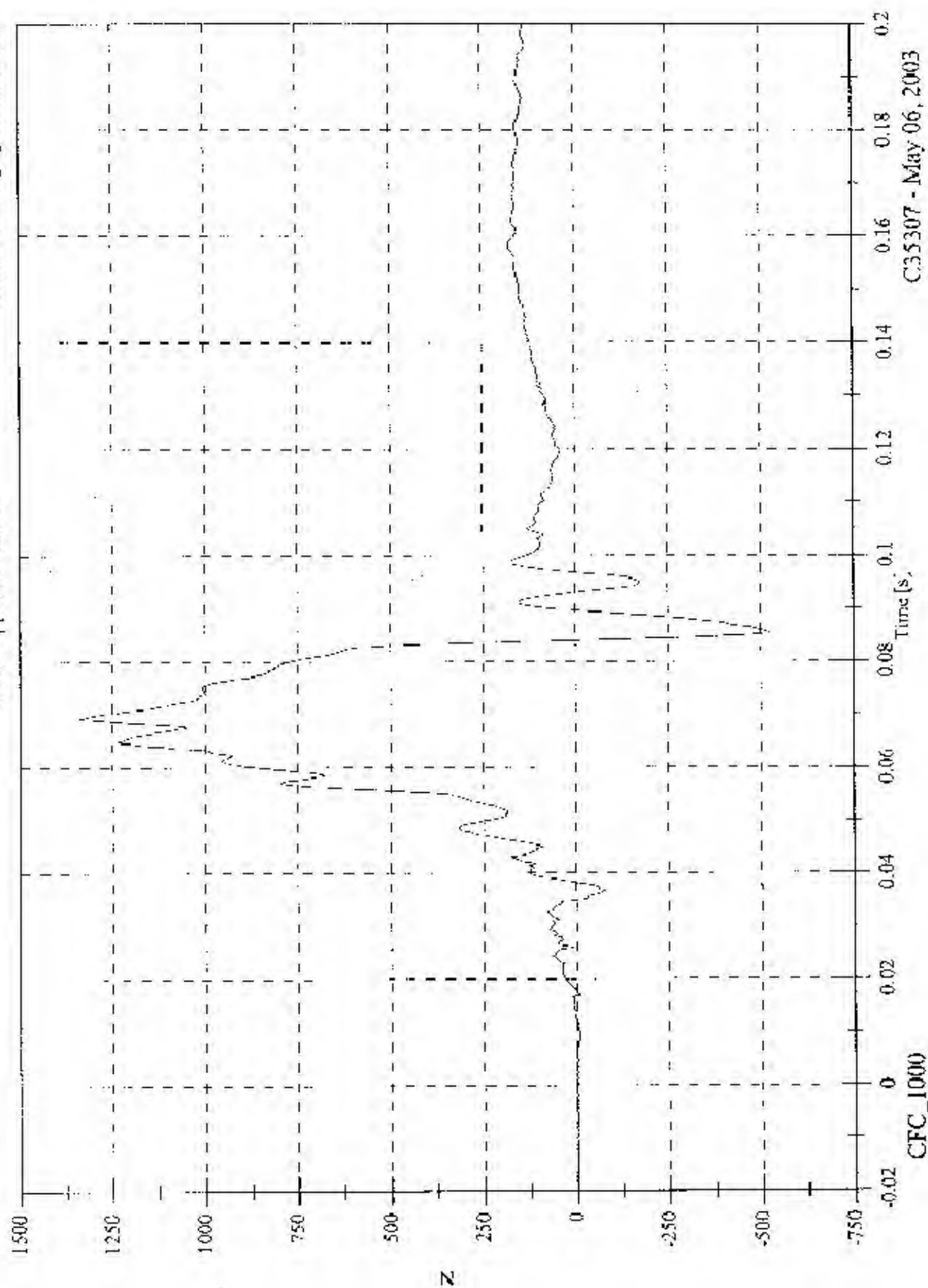


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 1337.0 [N] at 0.069 [s]
Min: -525.7 [N] at 0.085 [s]

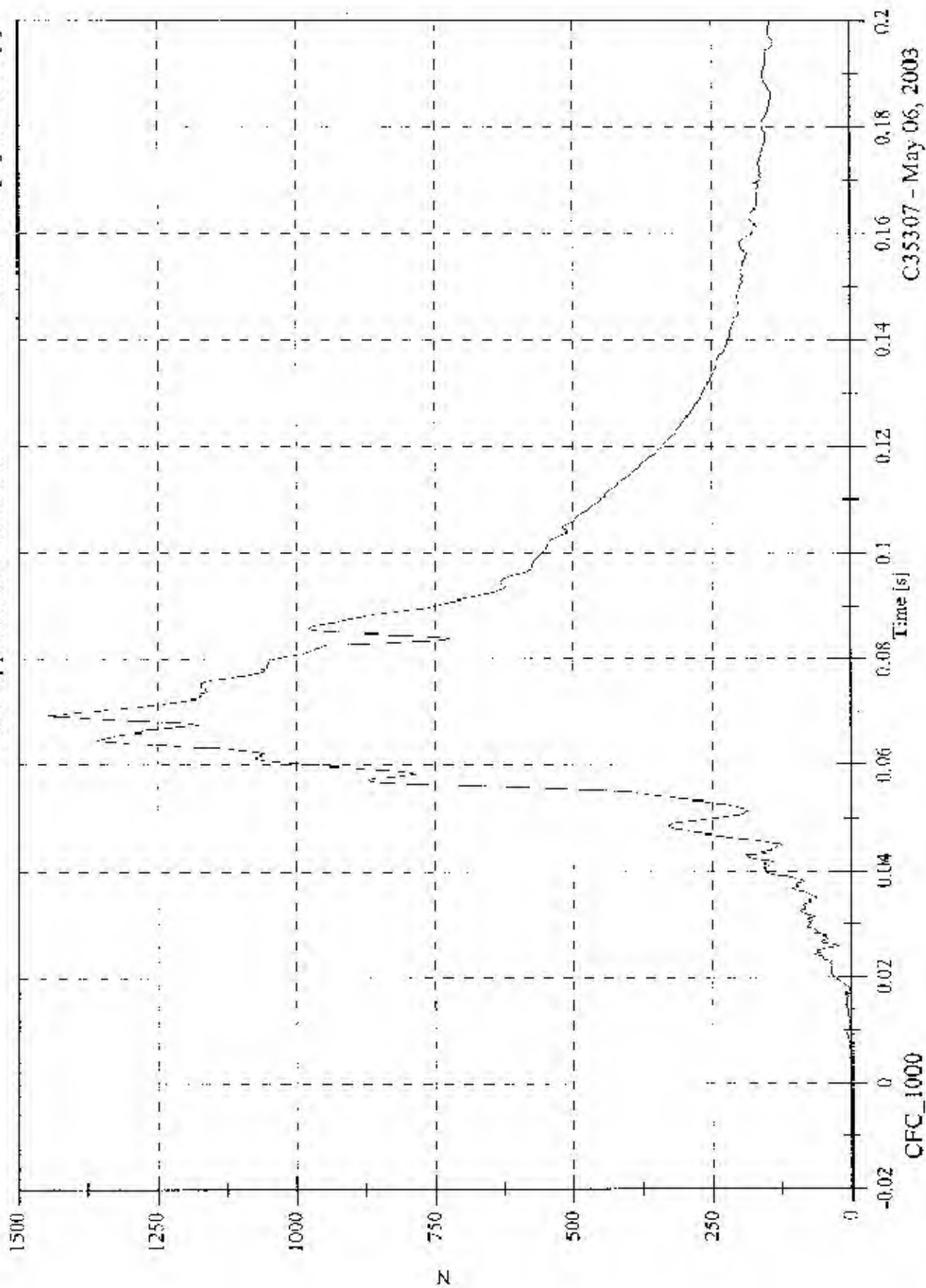
V2P1 Upper Neck Fz



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Max: 1444.9 [N] at 0.069 [s]
Min: 0.1 [N] at -0.014 [s]

V2P1 Upper Neck F Resultant

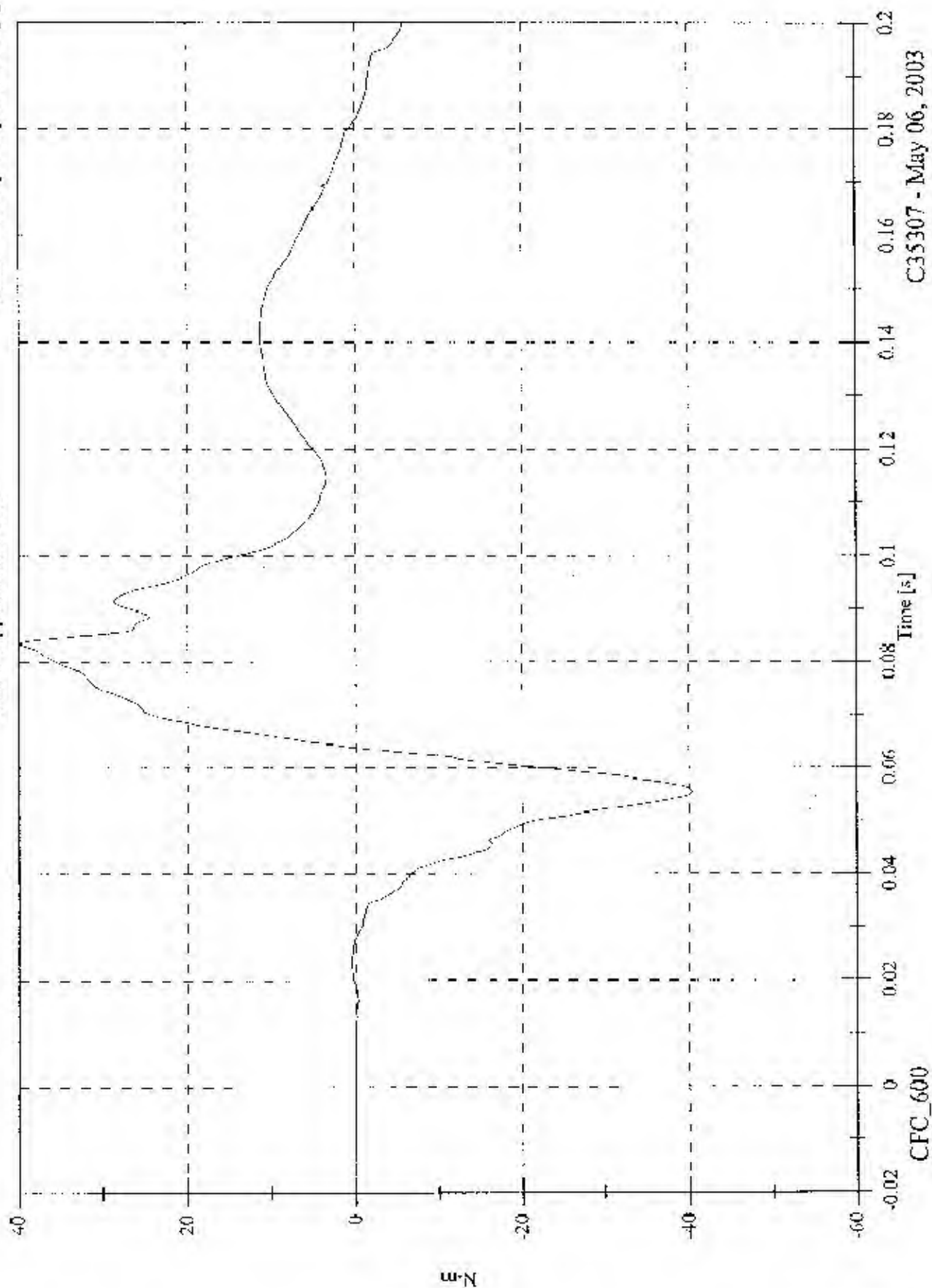


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 39.9 [N-m] at 0.083 [s]
Min: -40.4 [N-m] at 0.055 [s]

V2P1 Upper Neck Mfx

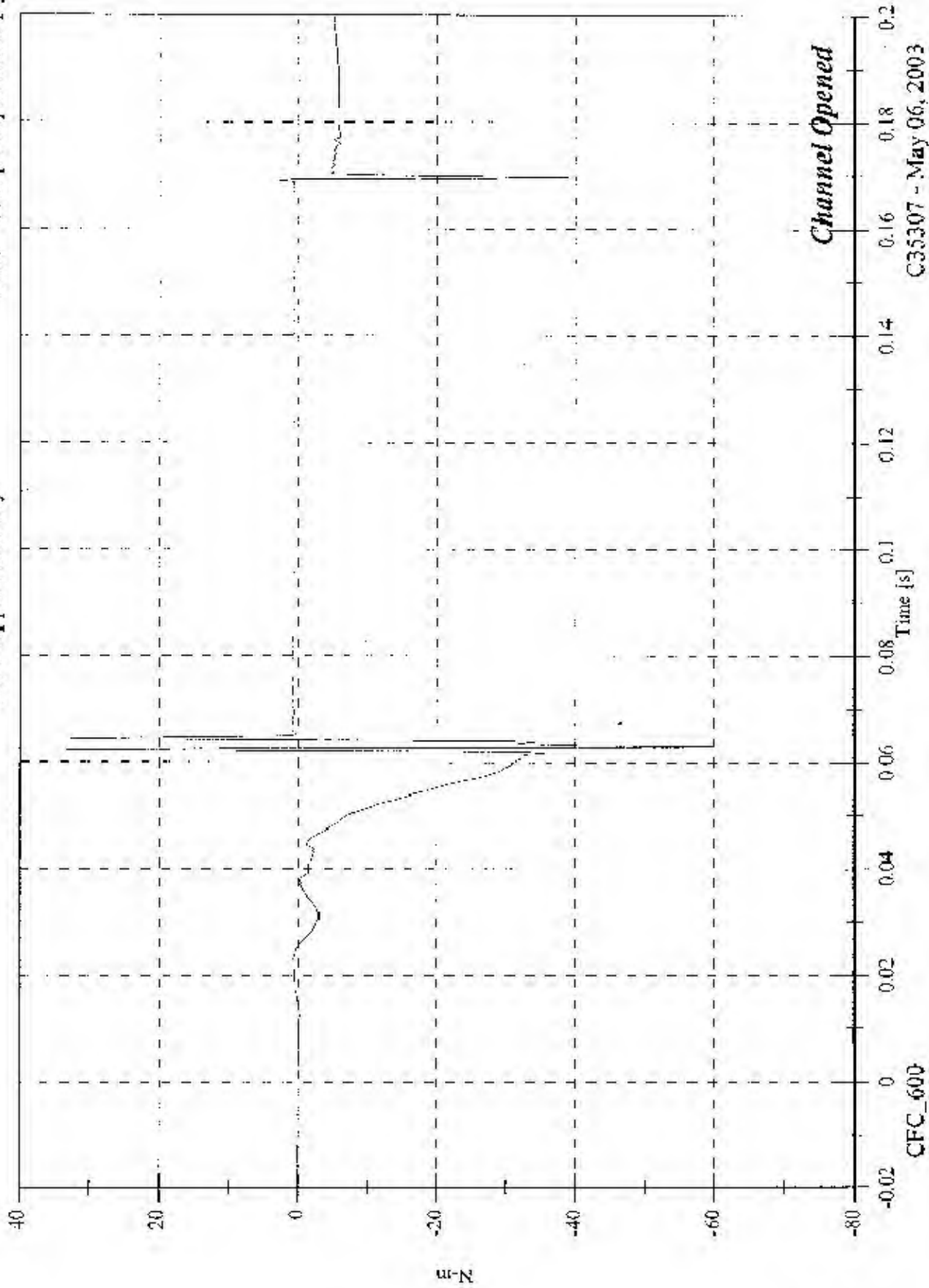


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2003 FMVSS 214D Test 8 2003 Honda Element

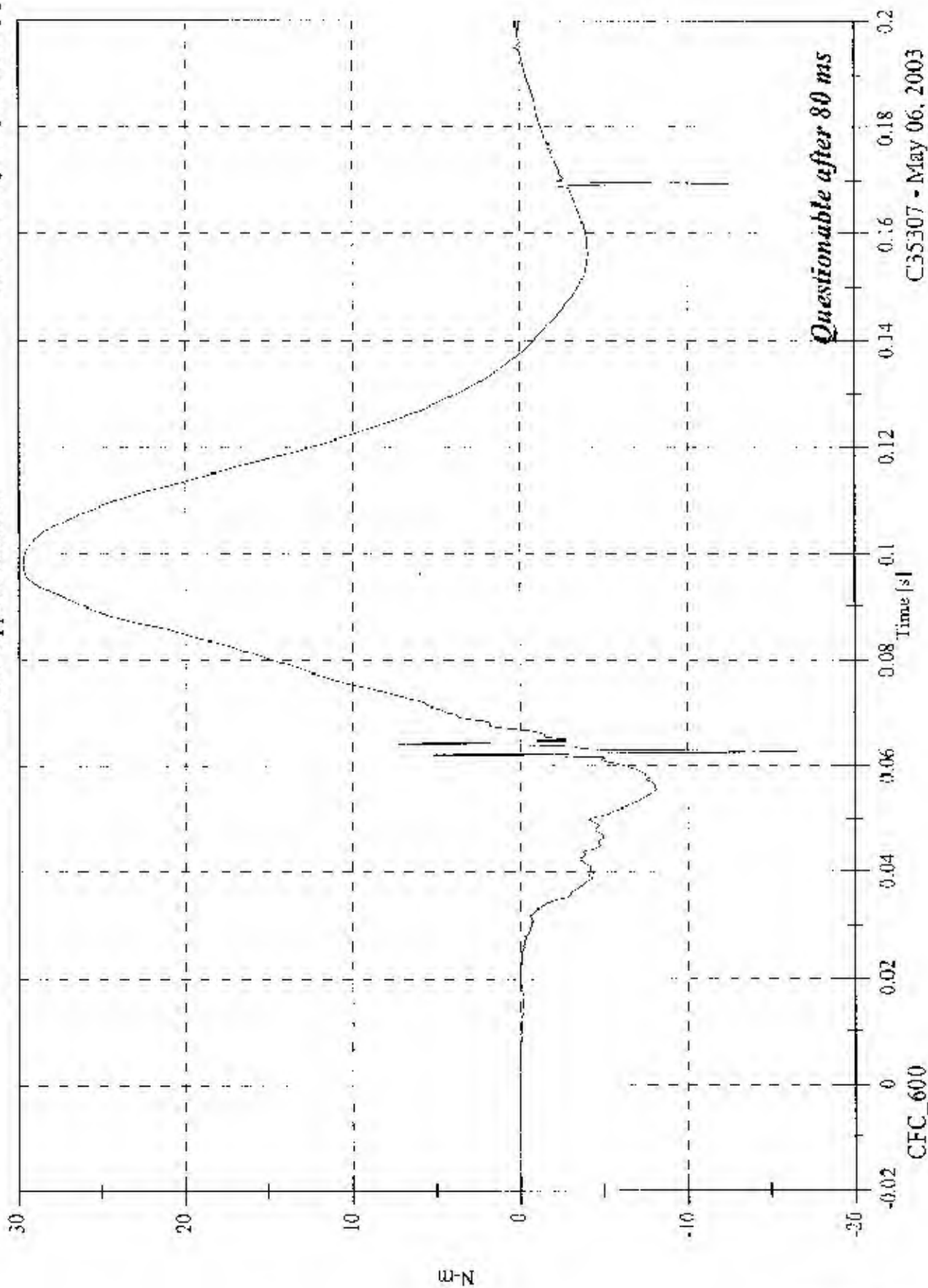
V2P1 Upper Neck My

Max: 33.3 [N-m] at 0.062 [s]
Min: -60.8 [N-m] at 0.063 [s]



Max: 29.7 [N-m] at 0.098 [s]
Min: -16.5 [N-m] at 0.063 [s]

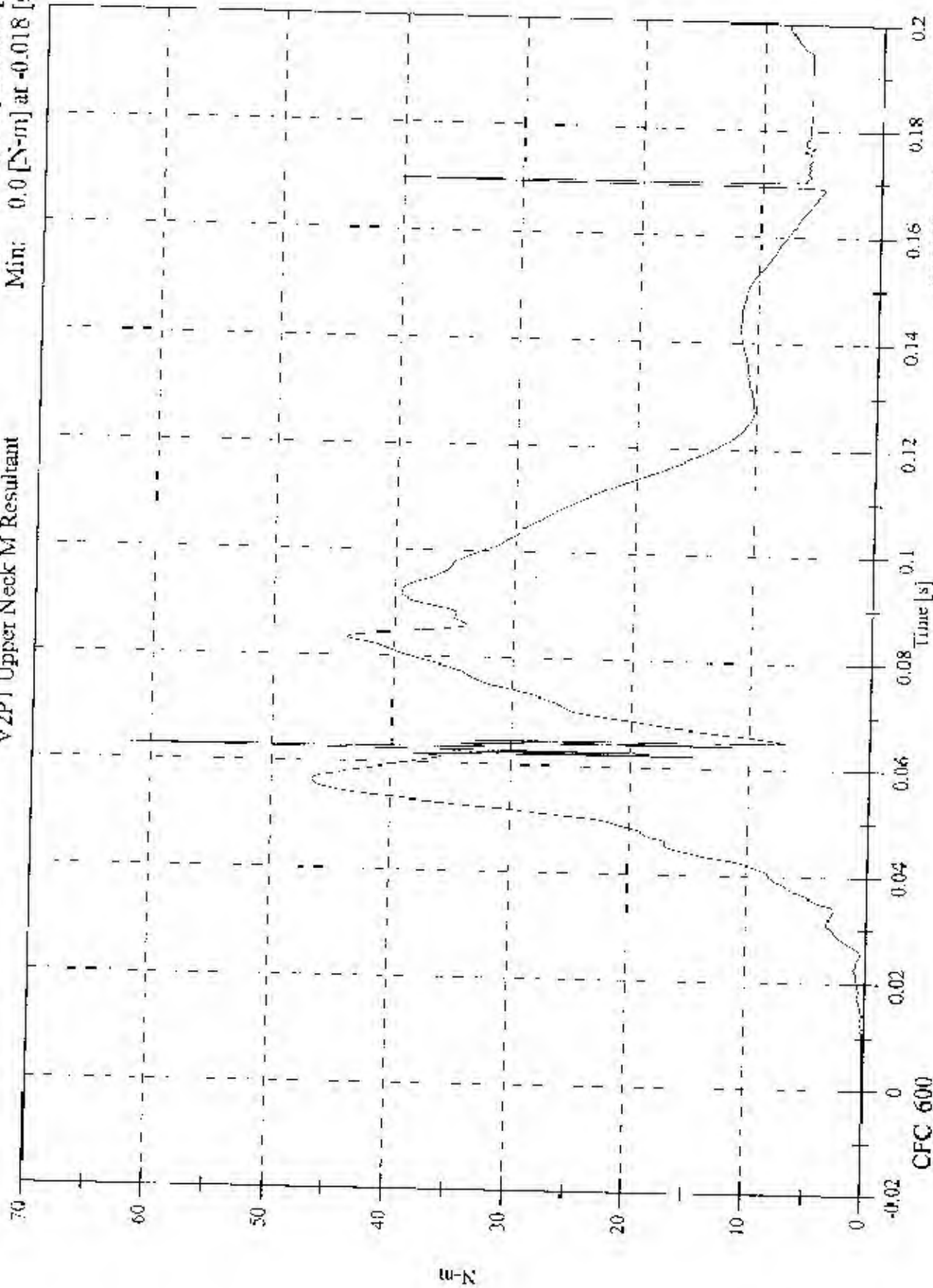
V2P1 Upper Neck Mz



2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Upper Neck M Resultant

Max: 62.1 [N-m] at 0.063 [s]
Min: 0.0 [N-m] at -0.018 [s]

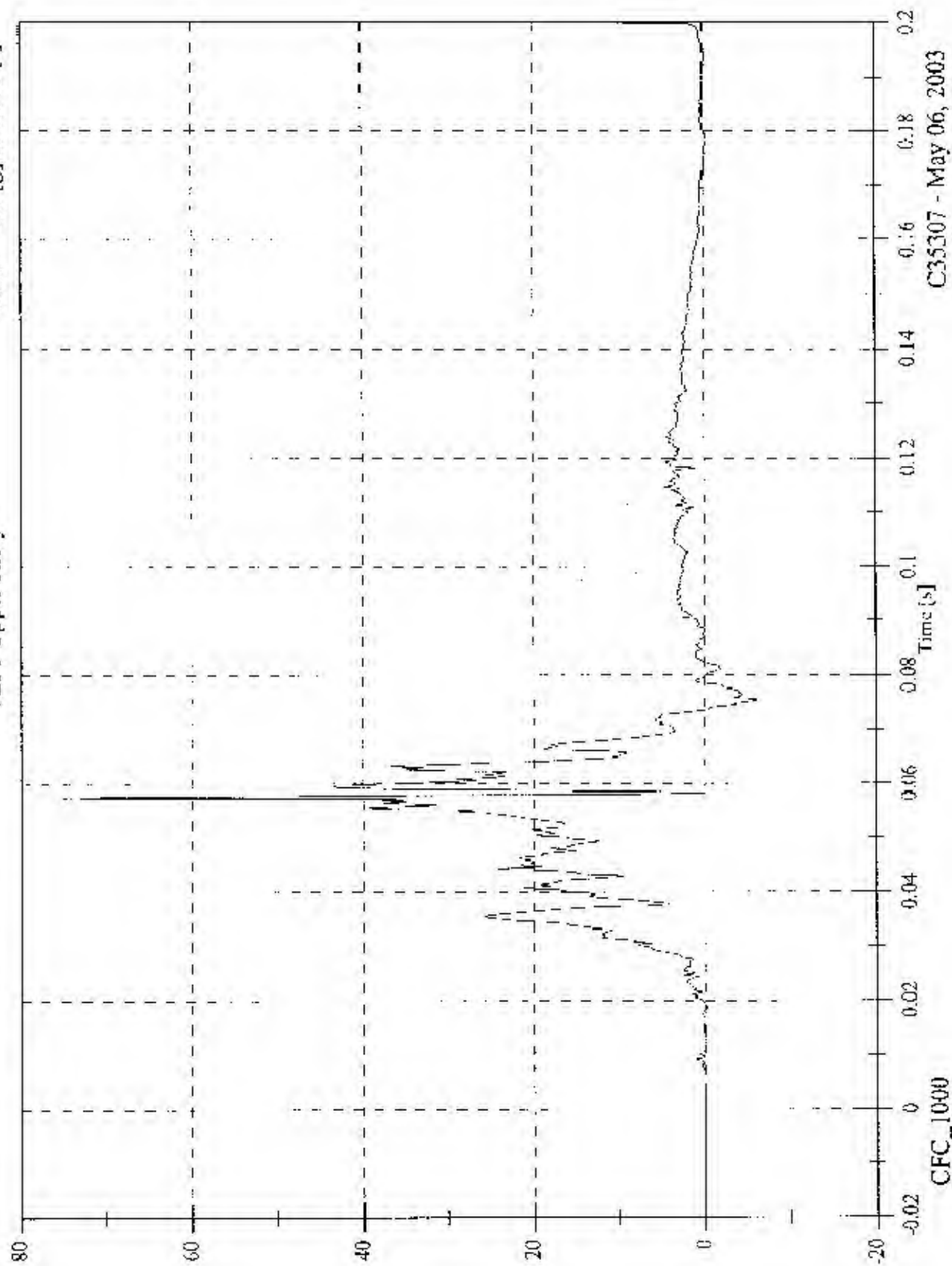


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 77.1 [g] at 0.057 [s]
Min: -6.3 [g] at 0.076 [s]

V2P1 Upper Rib y

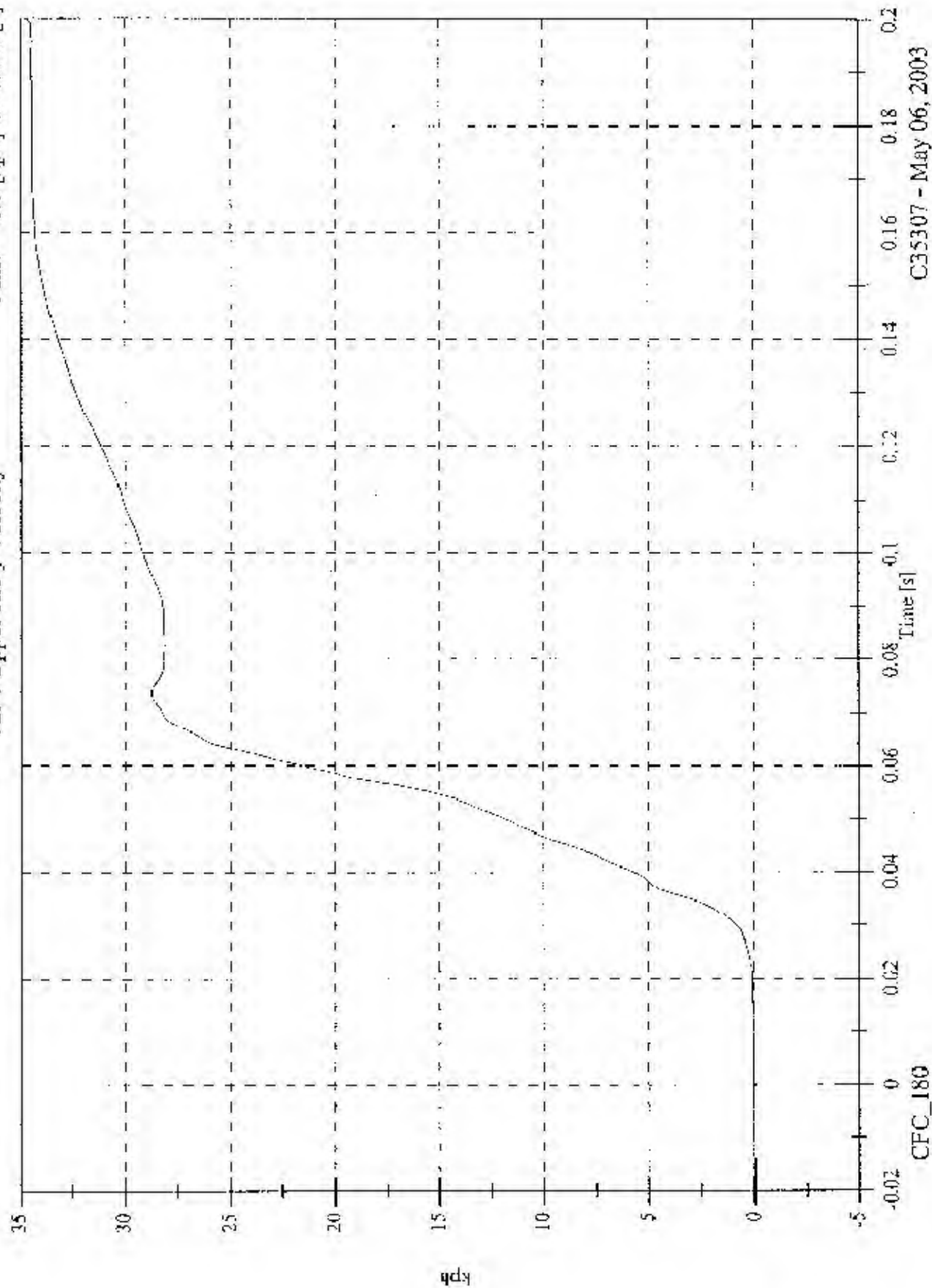


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2003 FM(VSS 2J4D Test 8 2003 Honda Element

Max: 34.8 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Upper Rib y Velocity

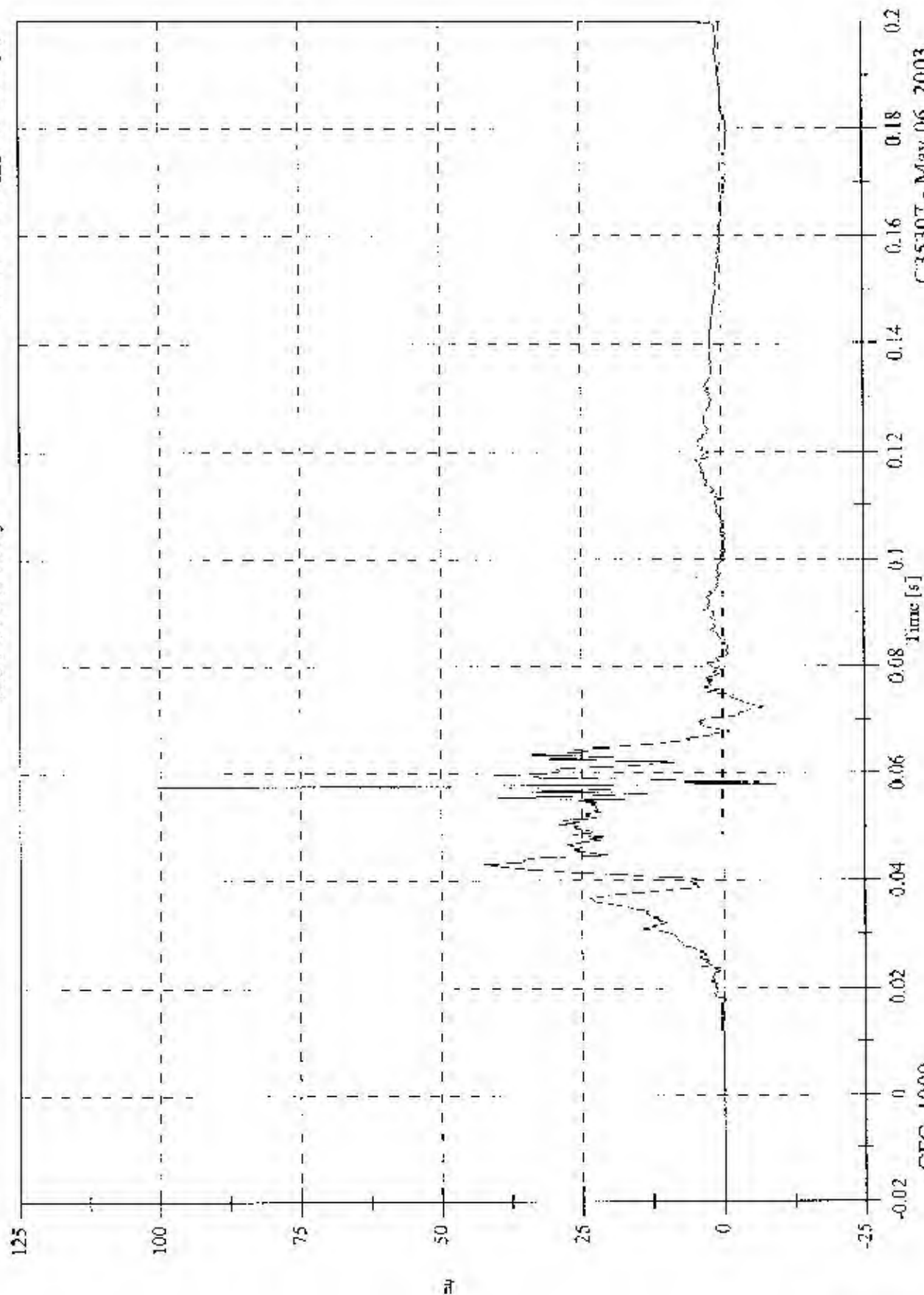


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Rib y

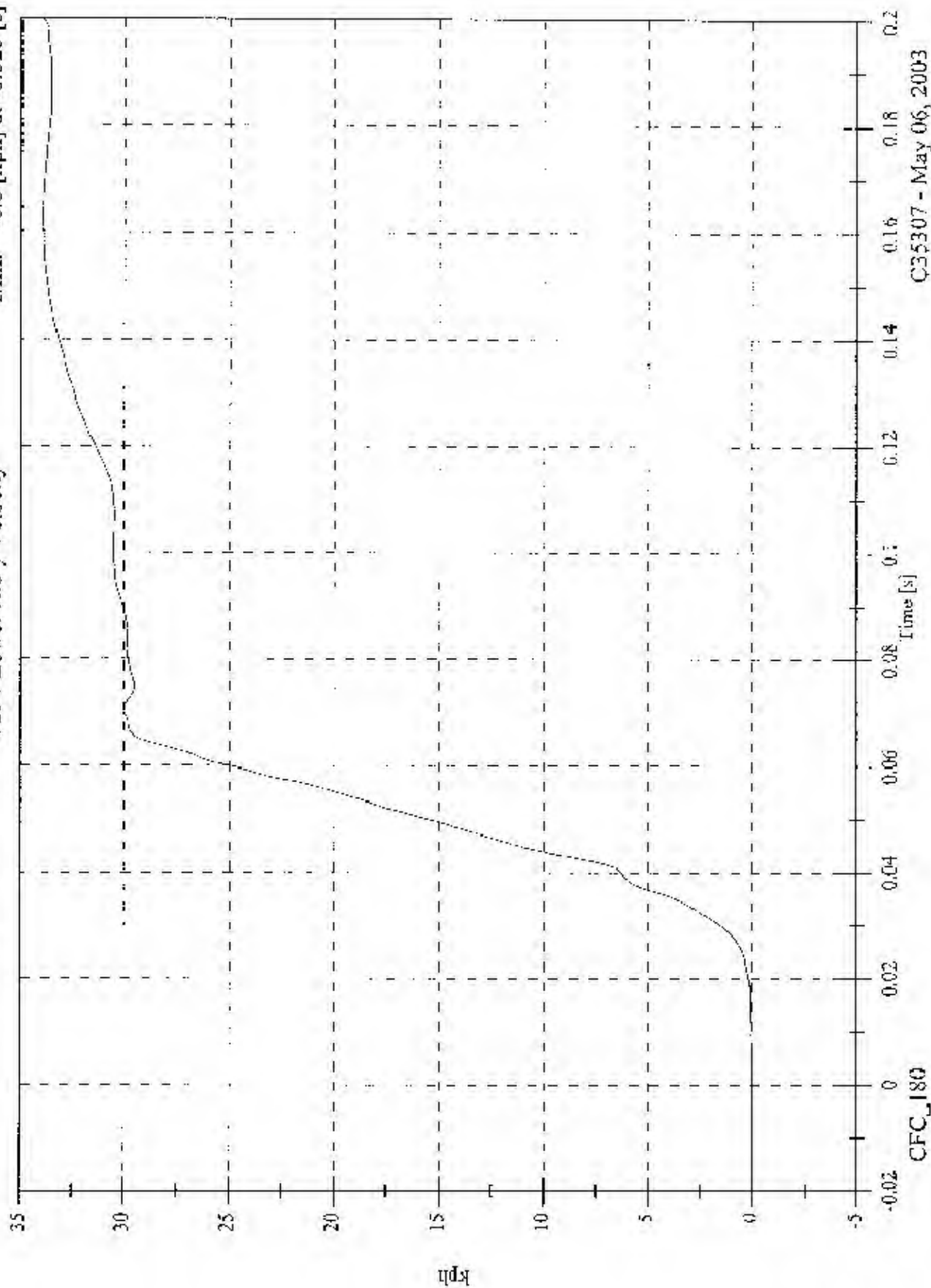
Max: 100.6 [g] at 0.058 [s]
Min: -11.6 [g] at 0.058 [s]



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Max: 34.0 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Rib y Velocity

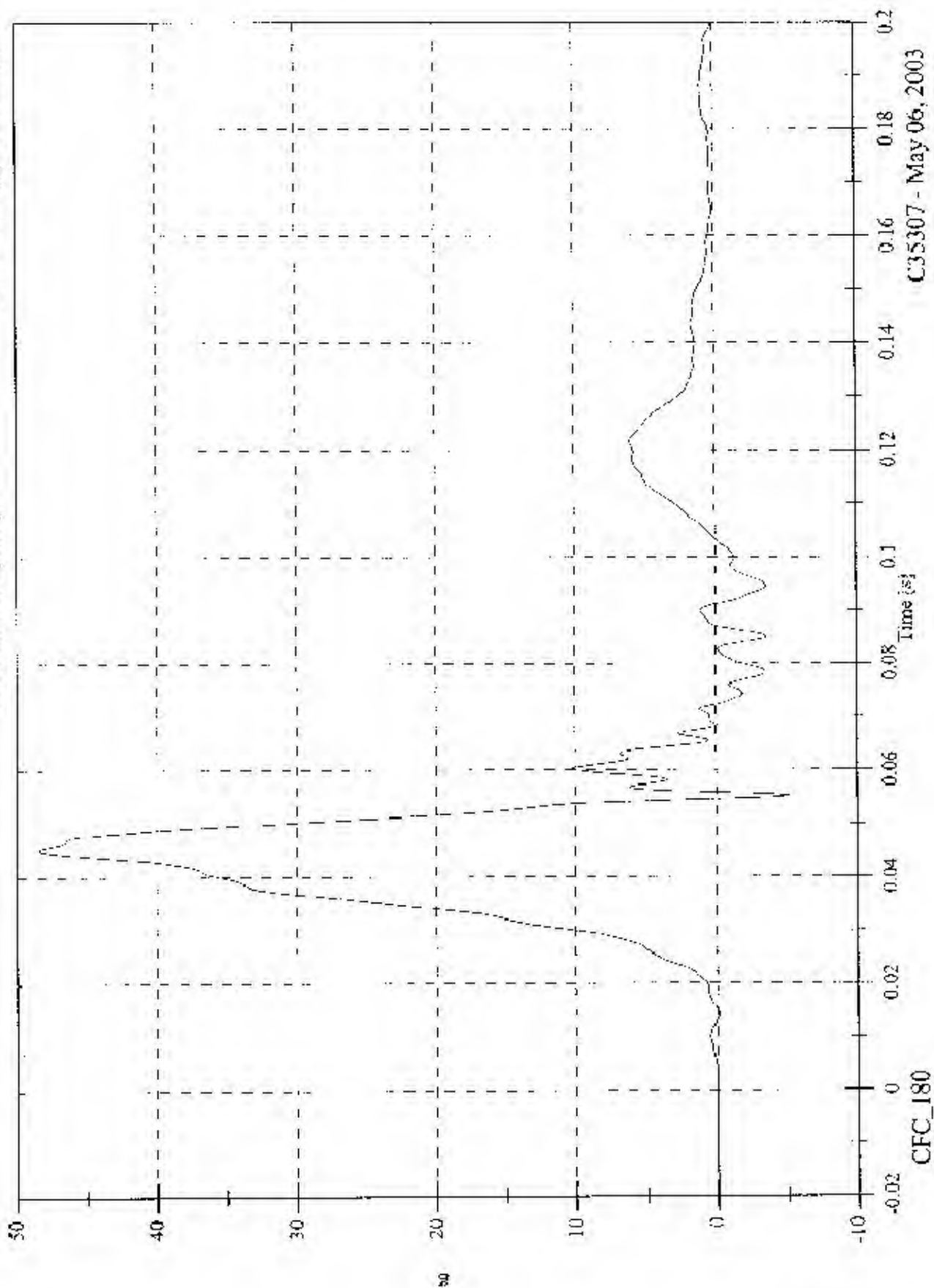


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Spine y

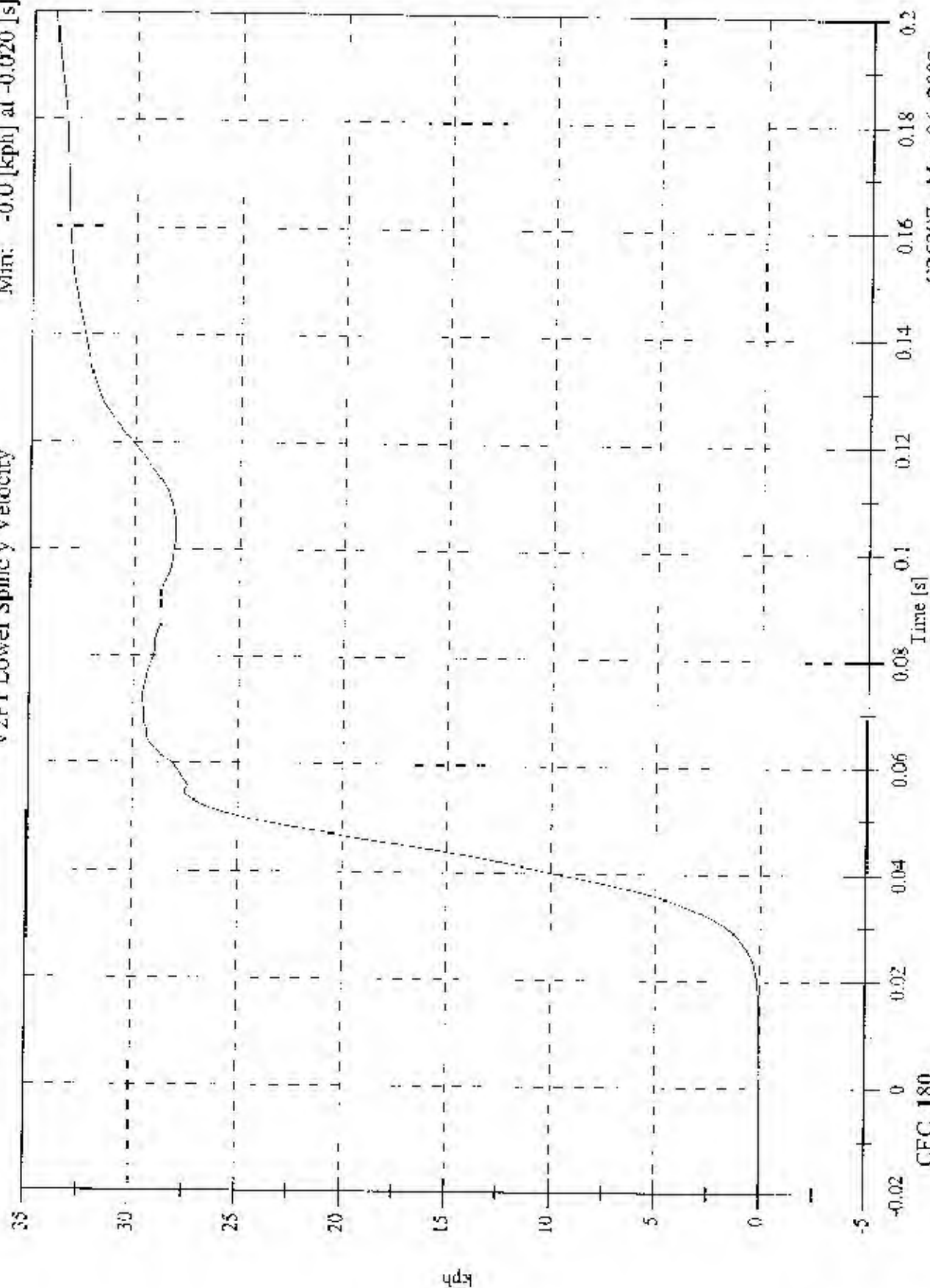
Max: 48.3 [g] at 0.045 [s]
Min: -5.1 [g] at 0.055 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Spine y Velocity

Max: 33.9 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

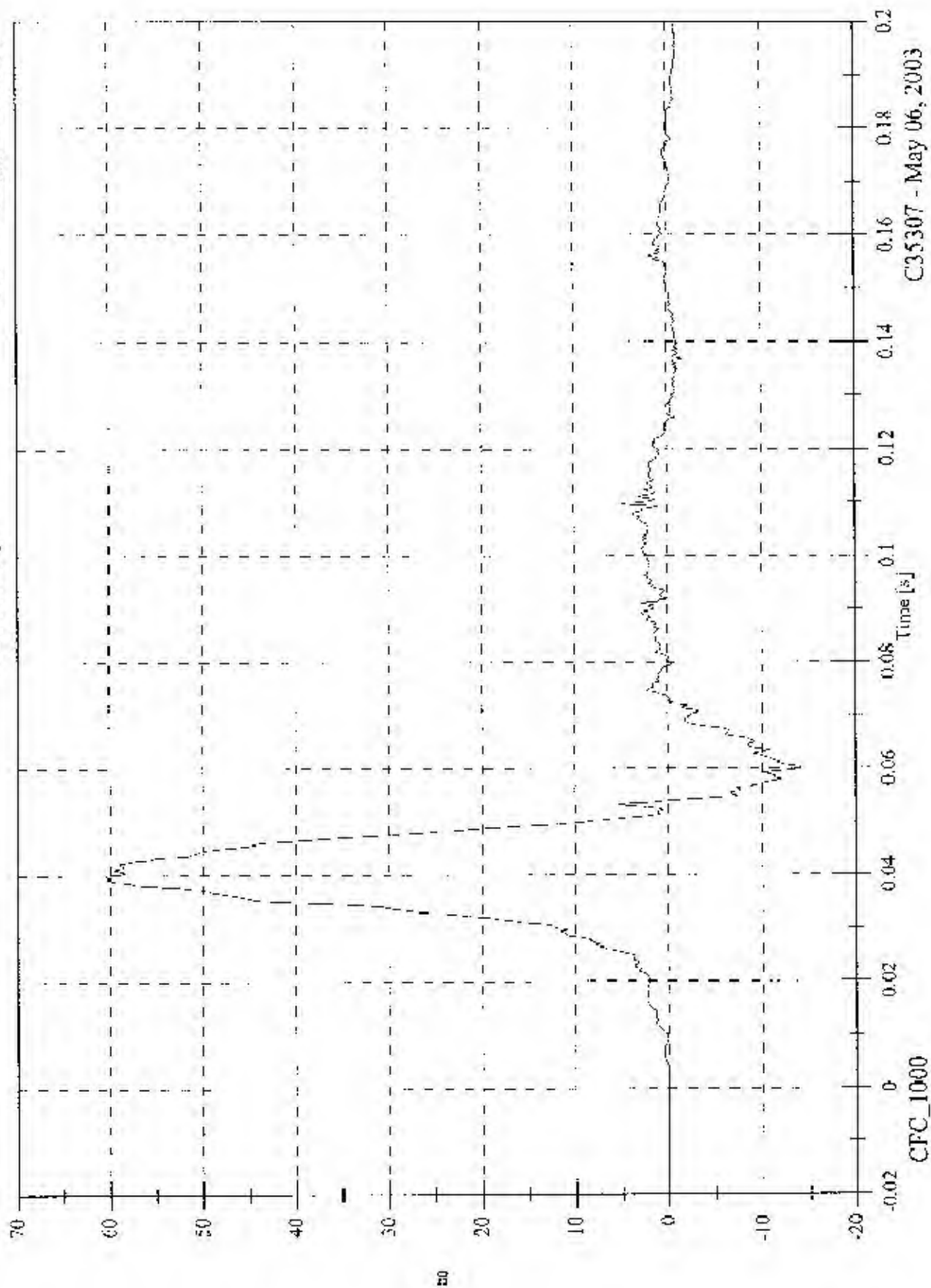


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2003 FMVSS 214D Test 8 2003 Honda Element

V2PI Pelvic y

Max: 60.3 [g] at 0.040 [s]
Min: -14.2 [g] at 0.060 [s]

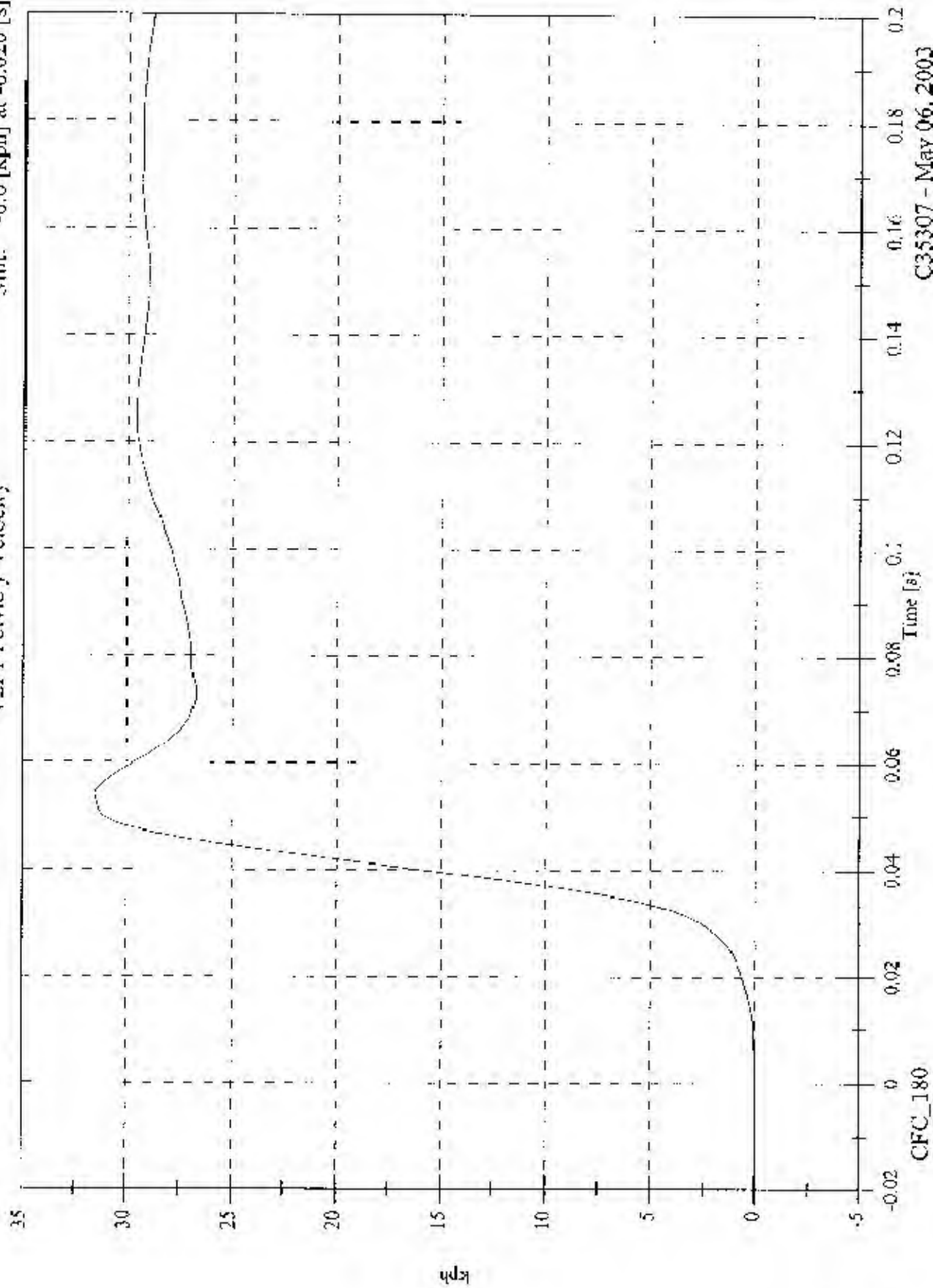


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 31.6 [kph] at 0.054 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Pelvic Velocity

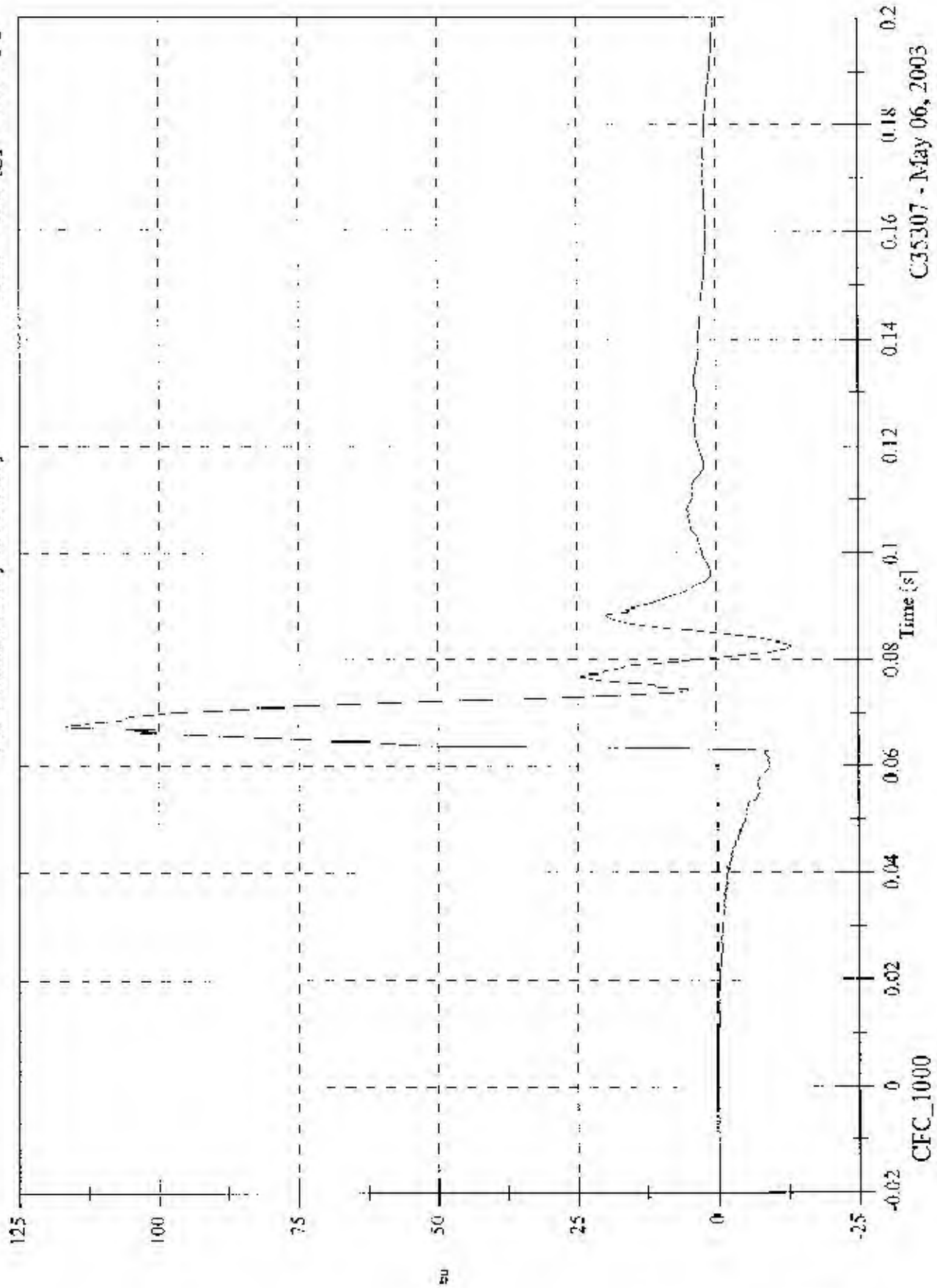


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Ay

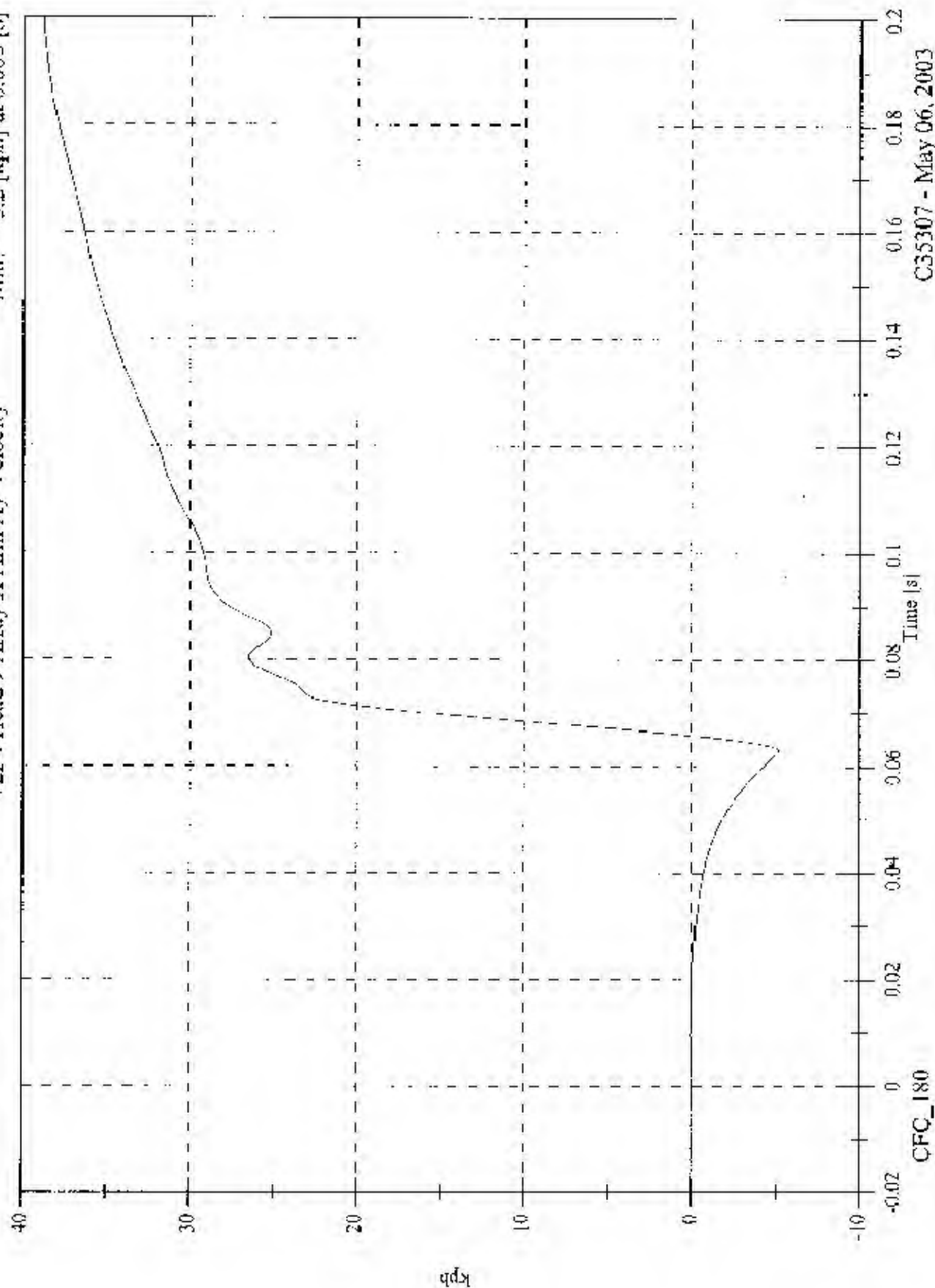
Max: 116.6 [g] at 0.067 [s]
Min: -13.0 [g] at 0.083 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Ay Velocity

Max: 38.8 [kph] at 0.200 [s]
Min: -5.2 [kph] at 0.063 [s]

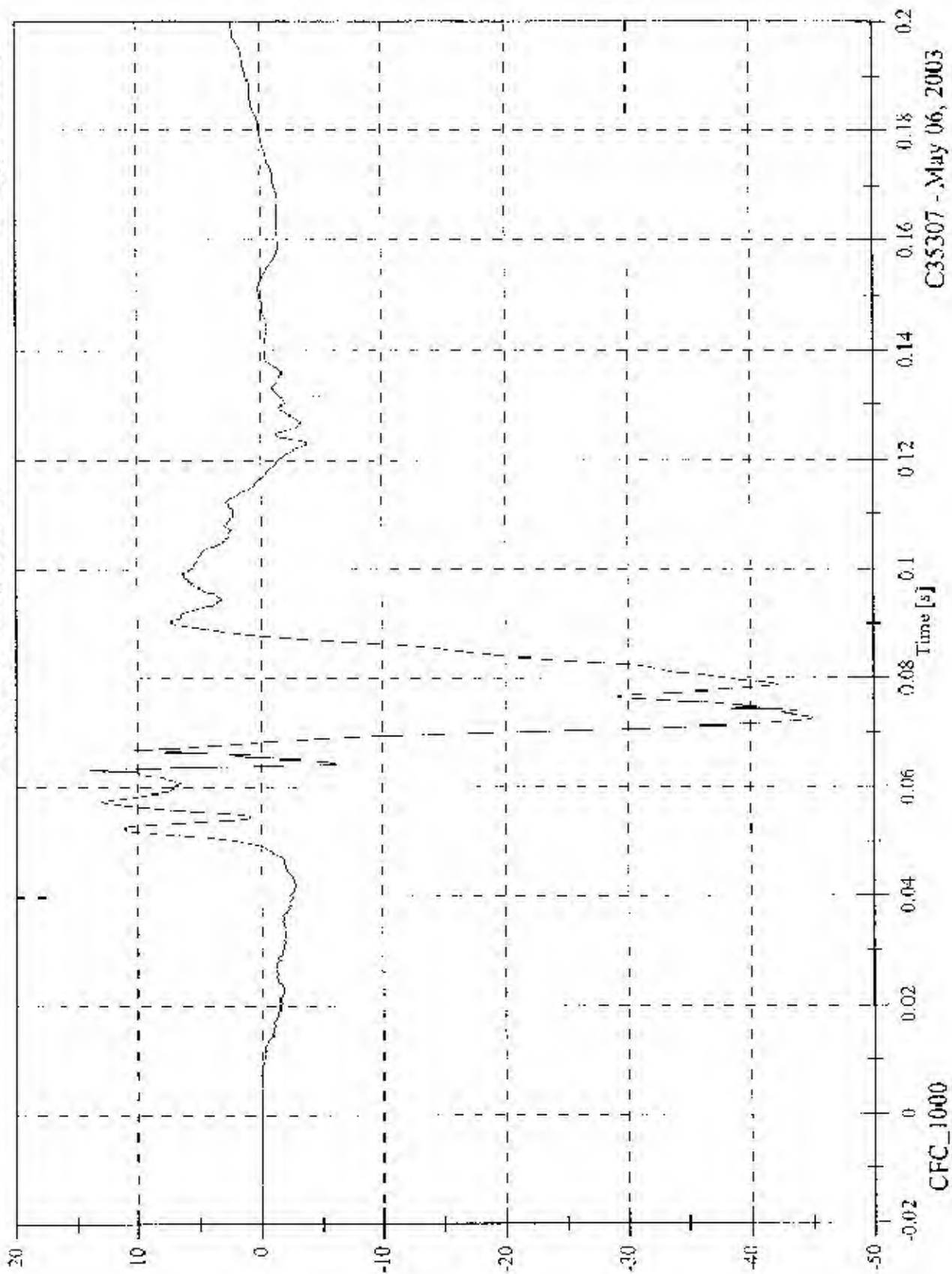


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Az

Max: 14.0 [g] at 0.063 [s]
Min: -45.0 [g] at 0.072 [s]

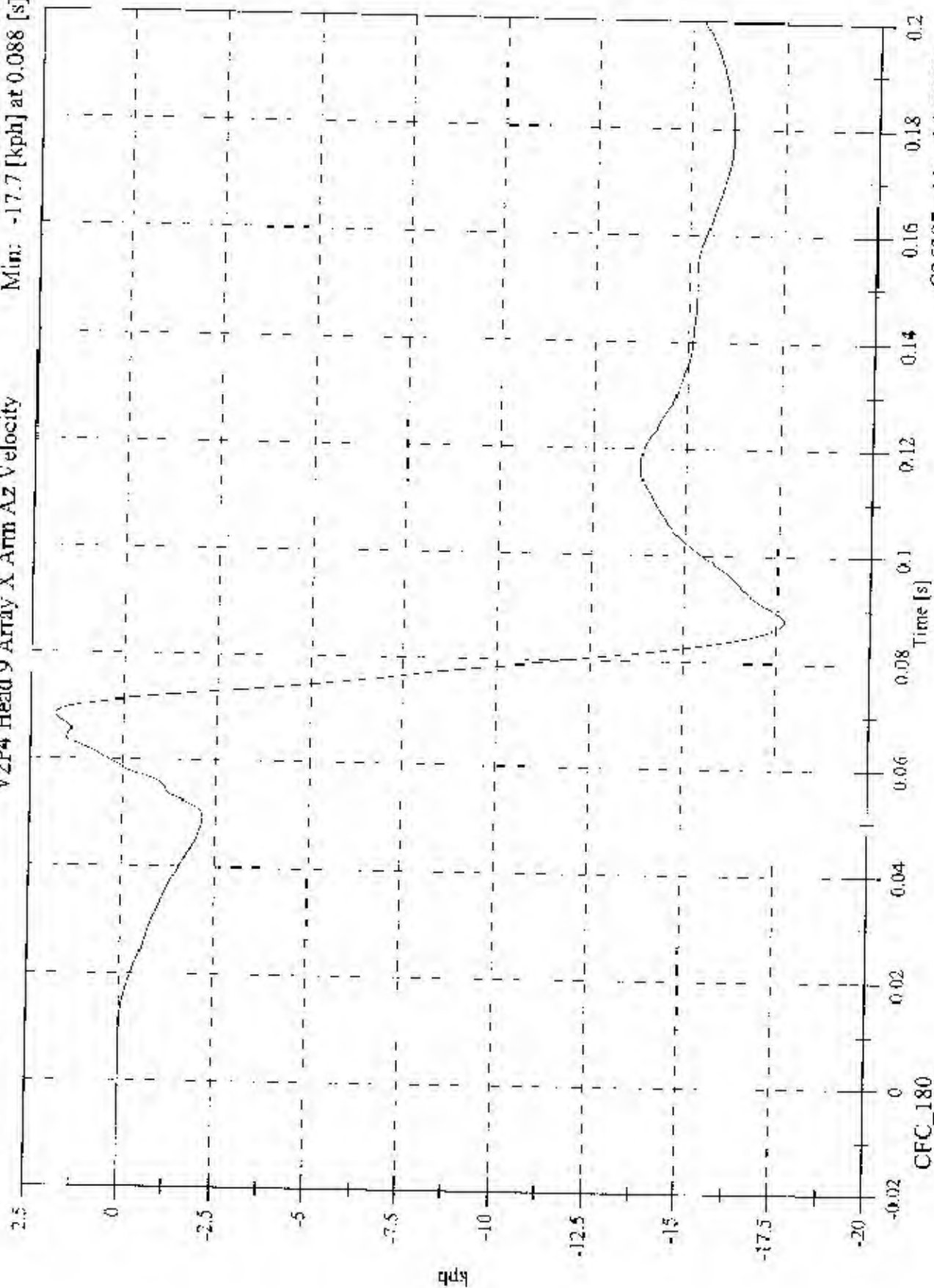


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Az Velocity

Max: 1.8 [kph] at 0.068 [s]
Min: -17.7 [kph] at 0.088 [s]

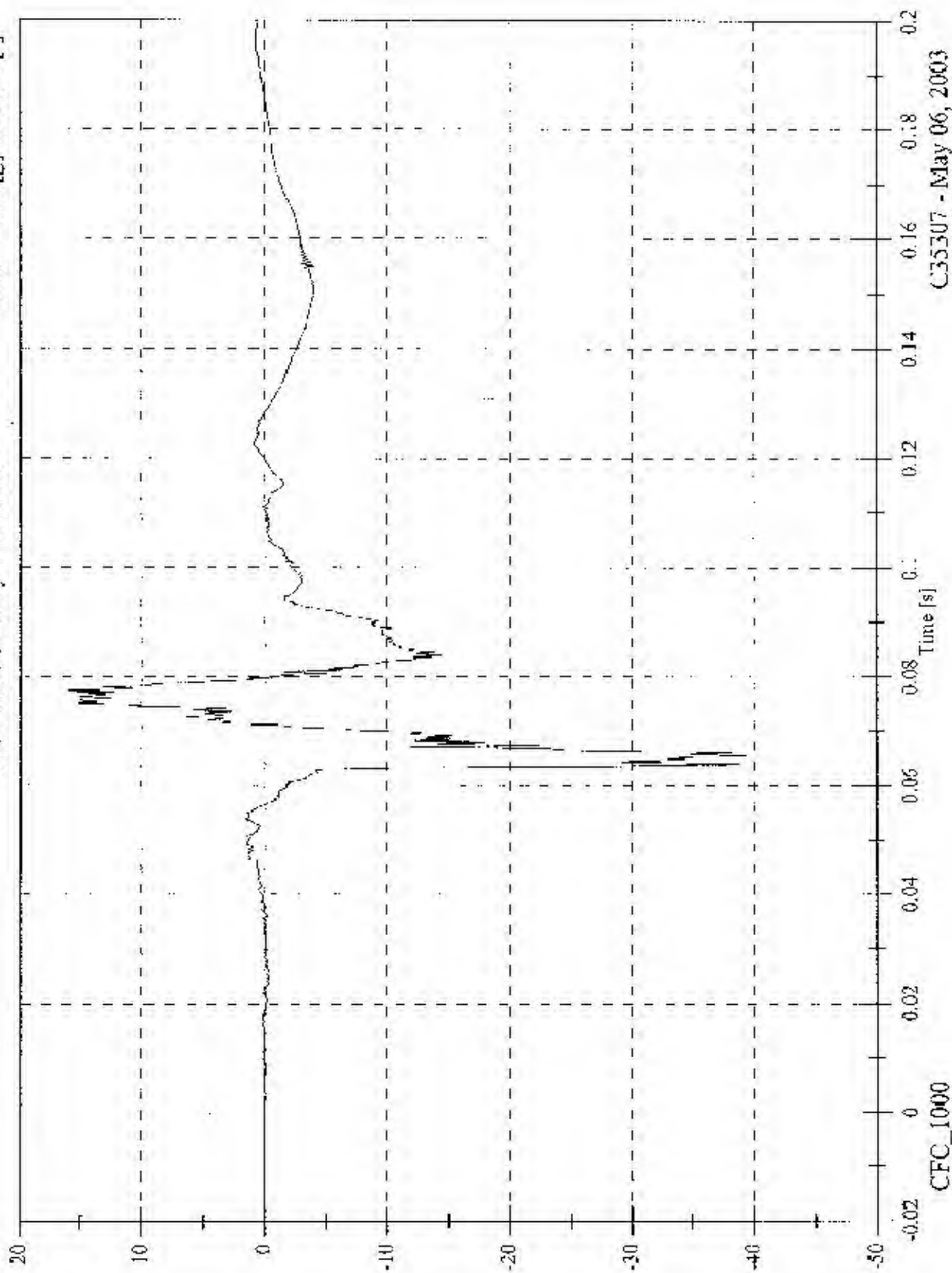


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Ax

Max: 16.3 [g] at 0.077 [s]
Min: -41.1 [g] at 0.064 [s]

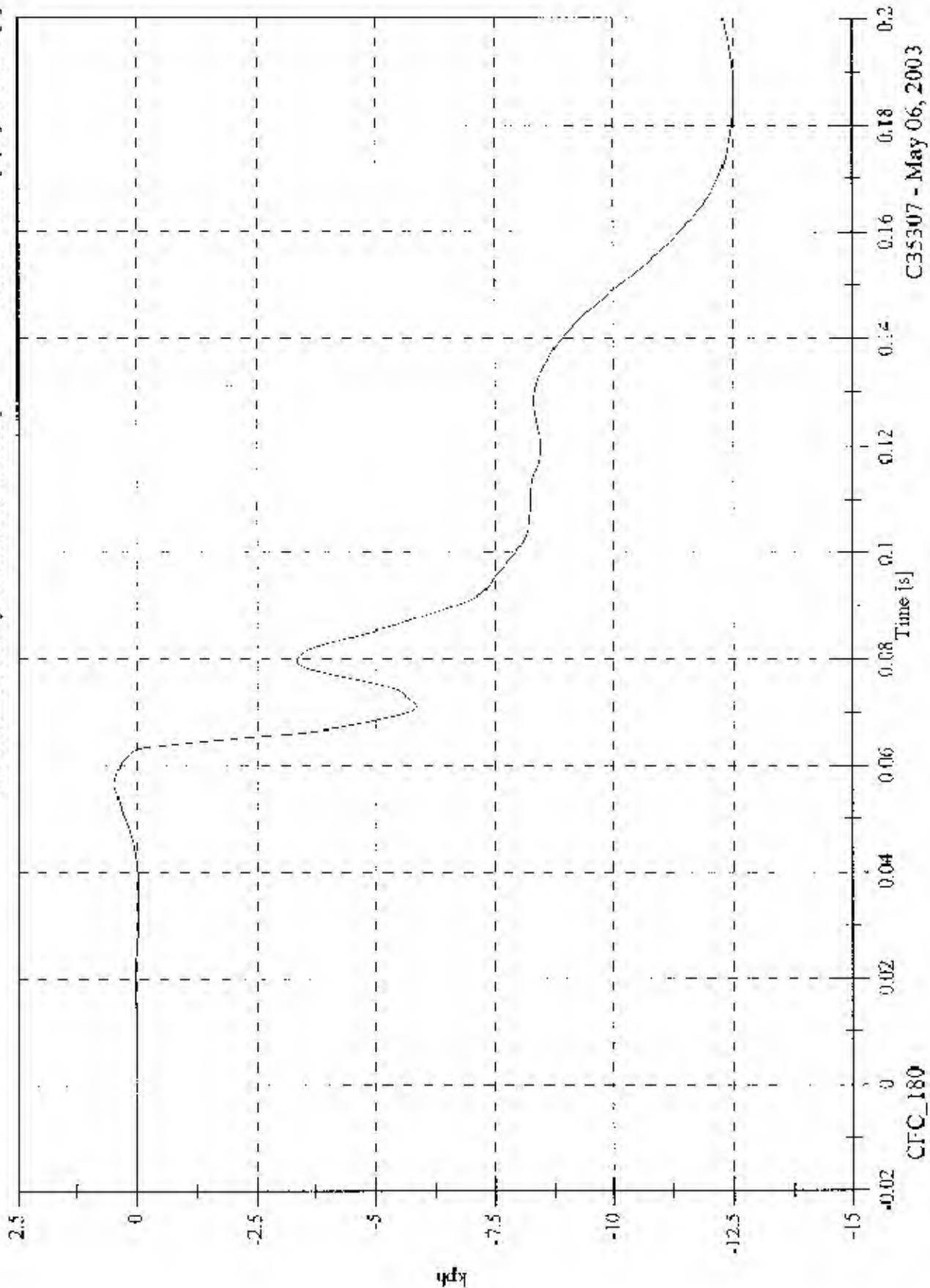


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.5 [kph] at 0.057 [s]
 Min: -12.5 [kph] at 0.186 [s]

V2P4 Head 9 Array Y Arm Ax Velocity

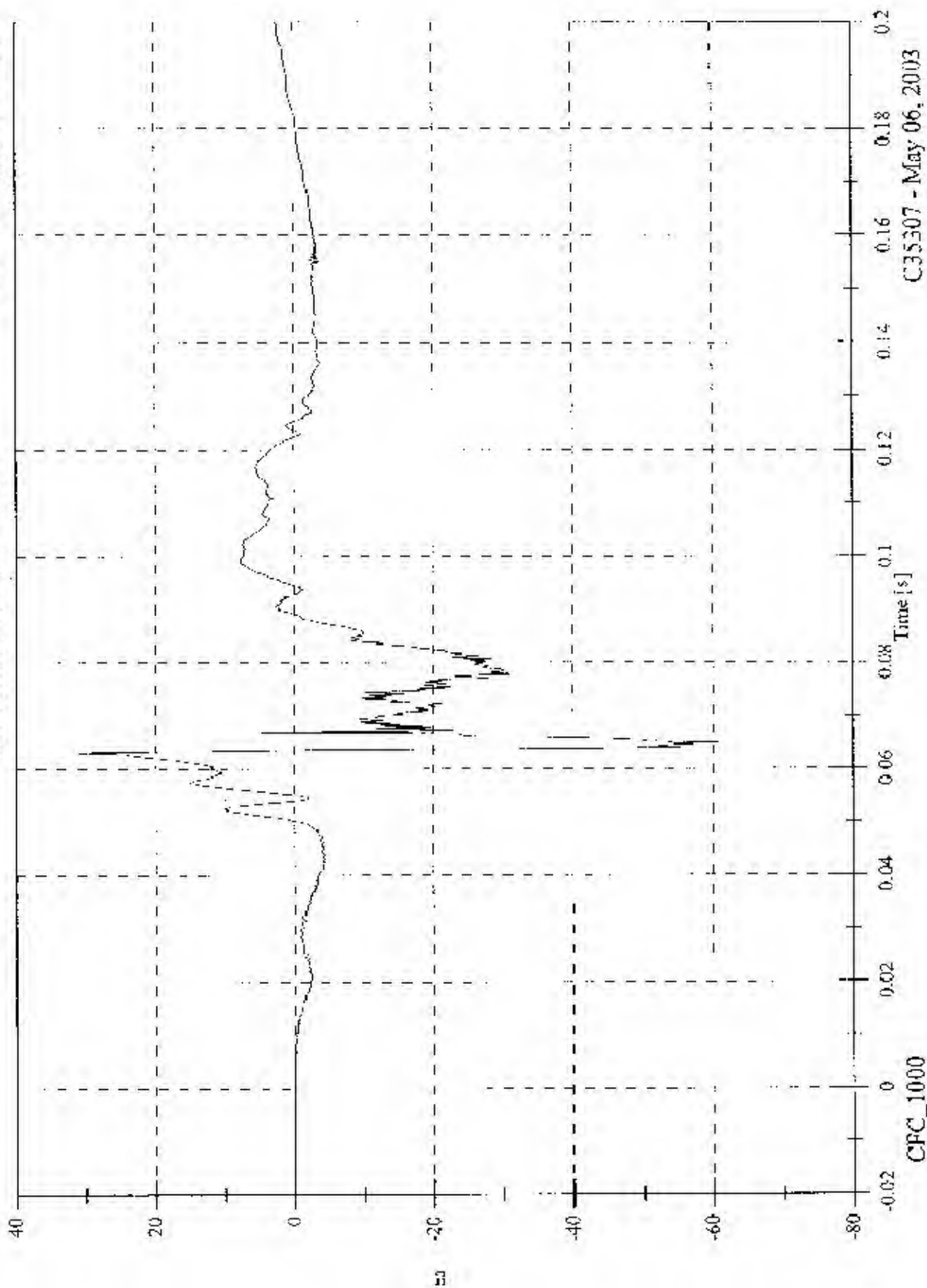


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Az

Max: 31.2 [g] at 0.063 [s]
Min: -60.7 [g] at 0.065 [s]

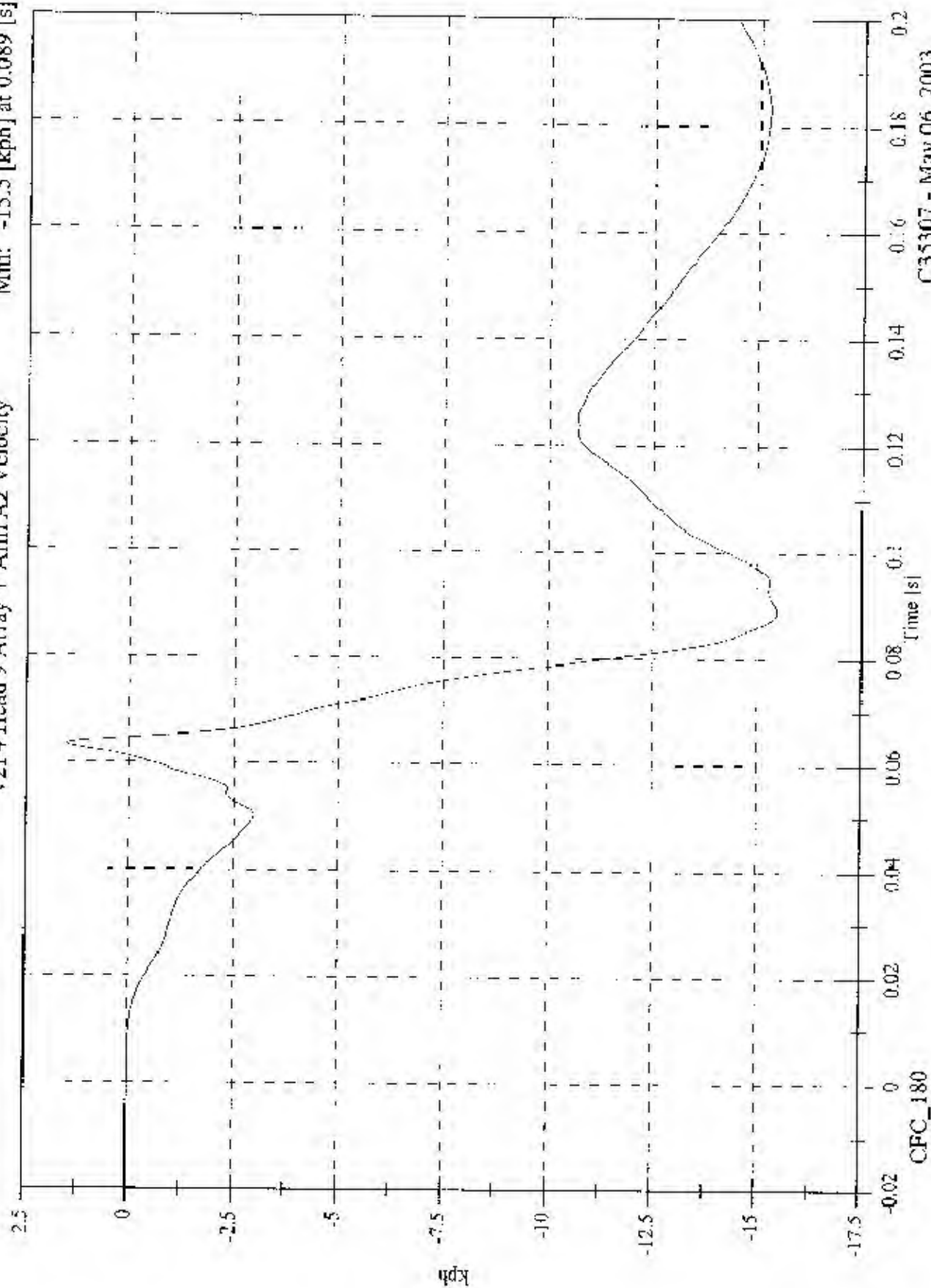


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Az Velocity

Max: 1.5 [kph] at 0.063 [s]
Min: -15.5 [kph] at 0.089 [s]

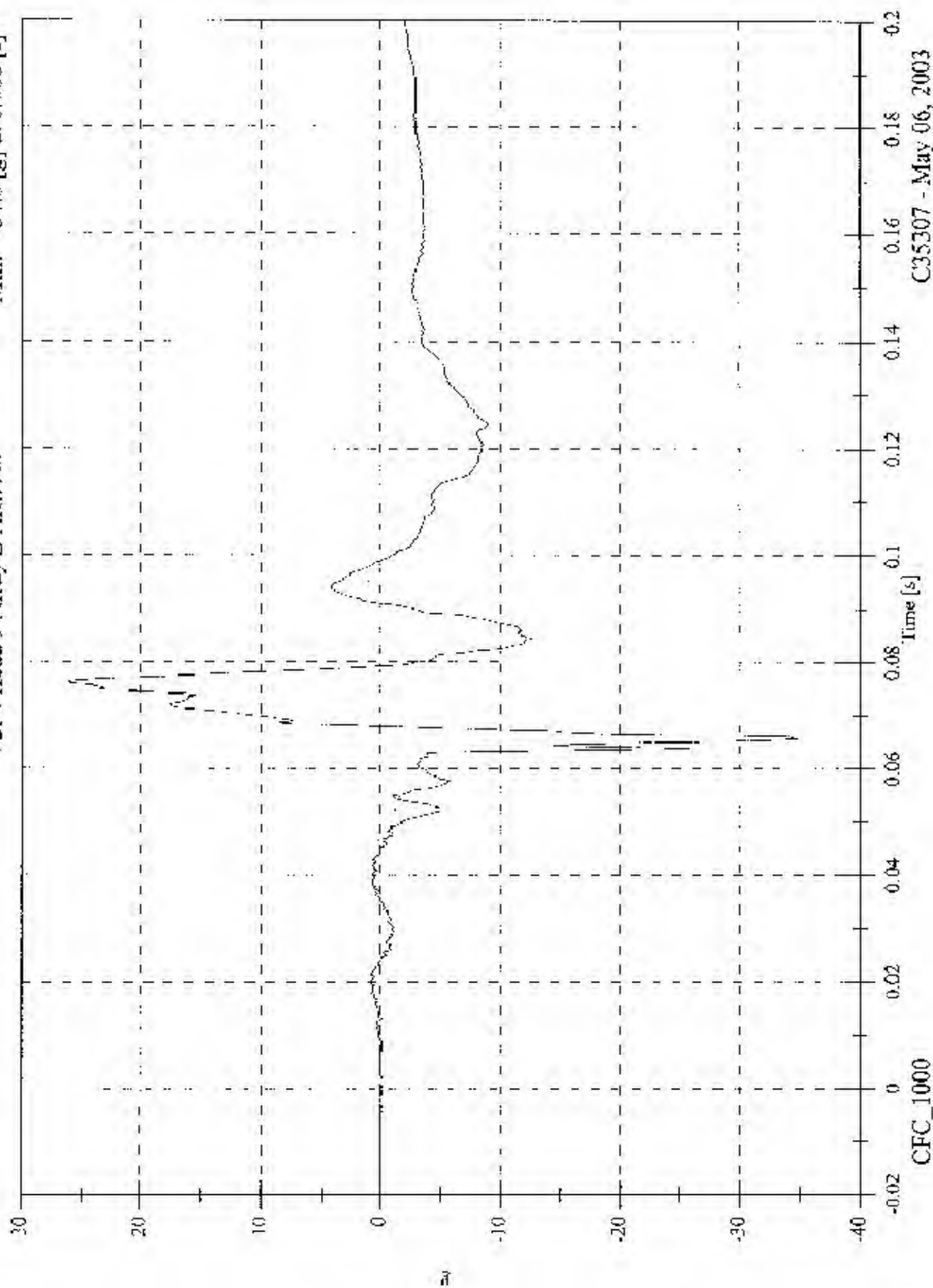


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ax

Max: 26.1 [g] at 0.076 [s]
Min: -34.8 [g] at 0.066 [s]

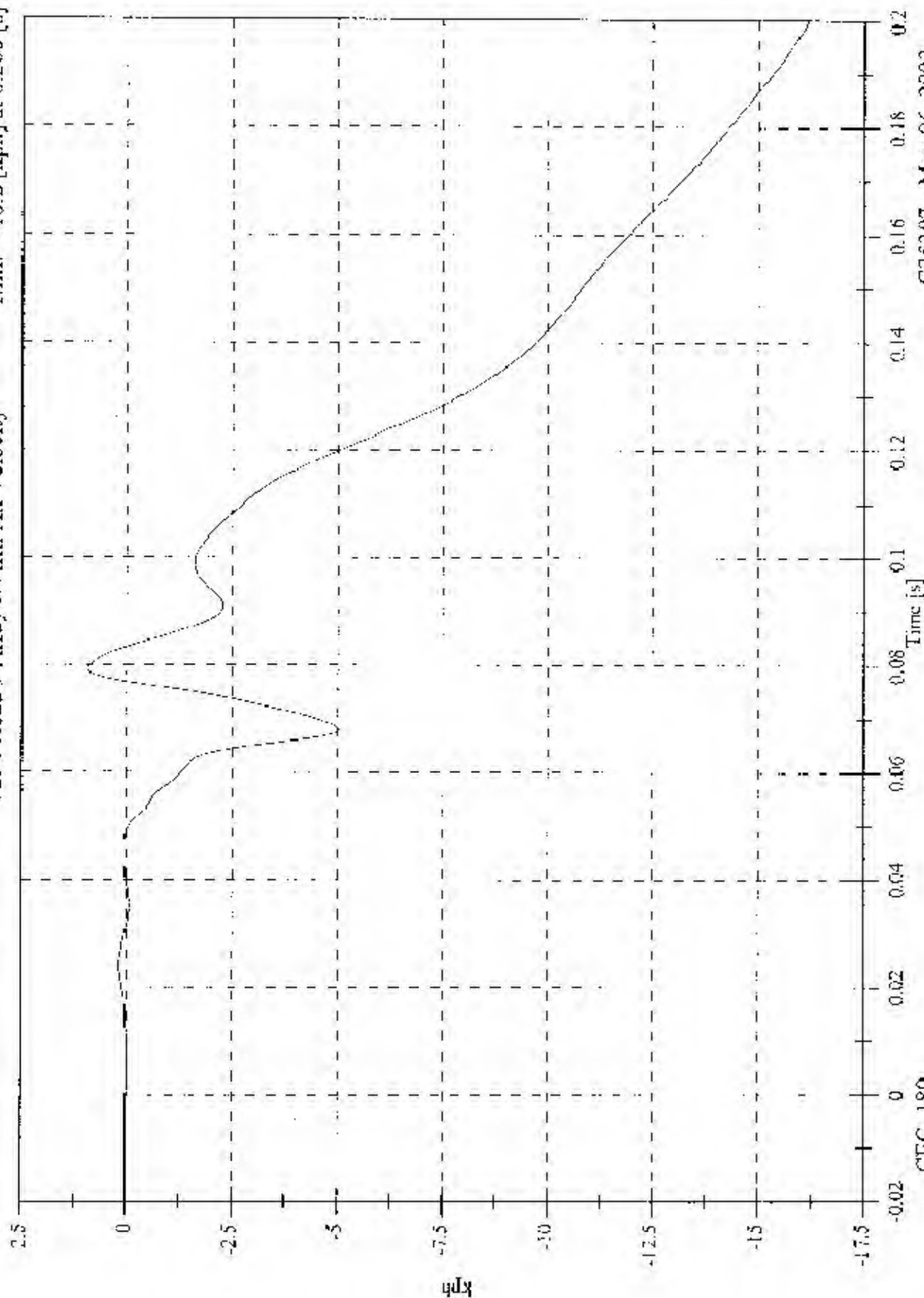


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2003 EMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z-Arm Ax Velocity

Max: 0.9 [kph] at 0.079 [s]
Min: -16.2 [kph] at 0.200 [s]

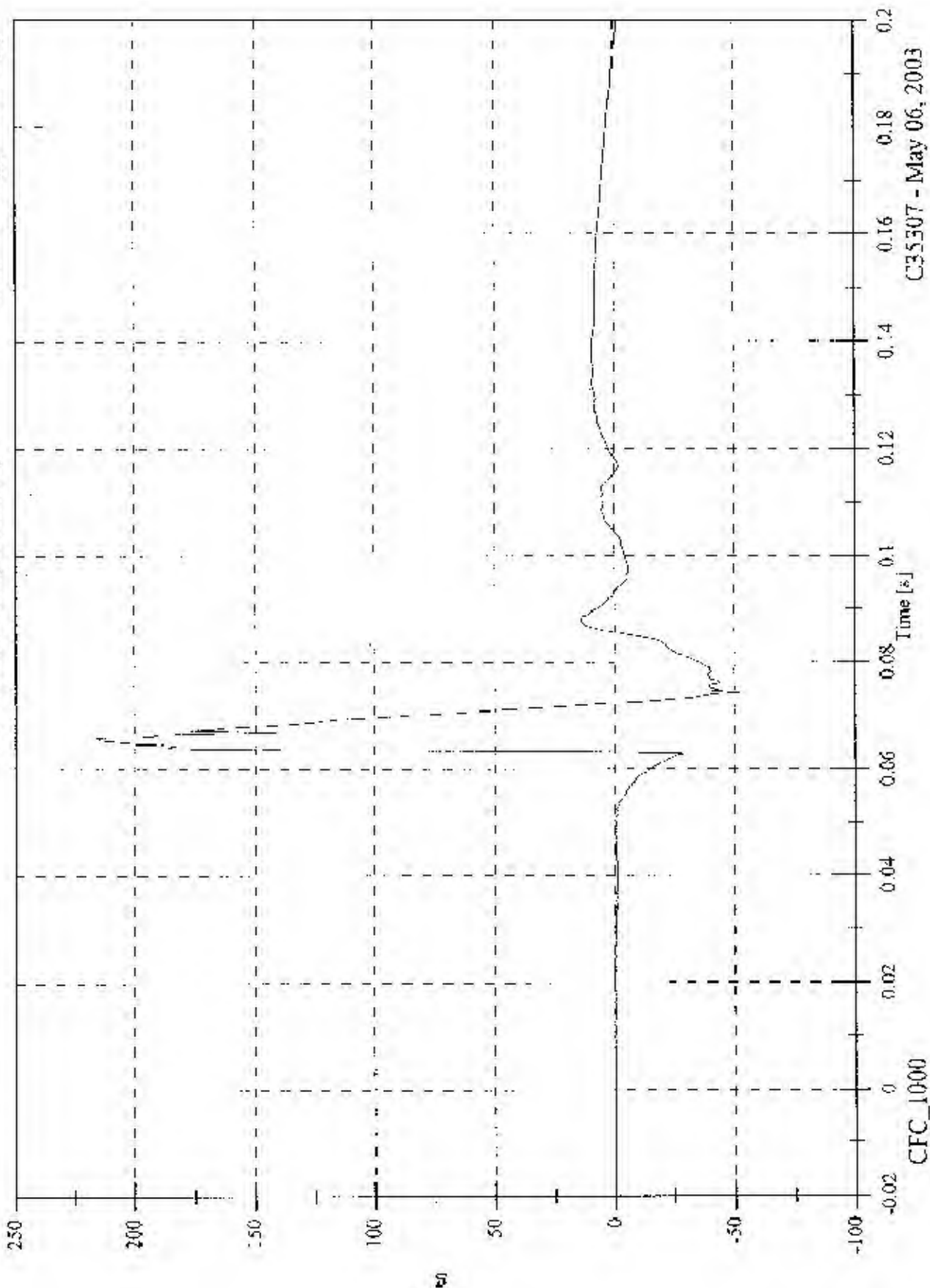


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ay

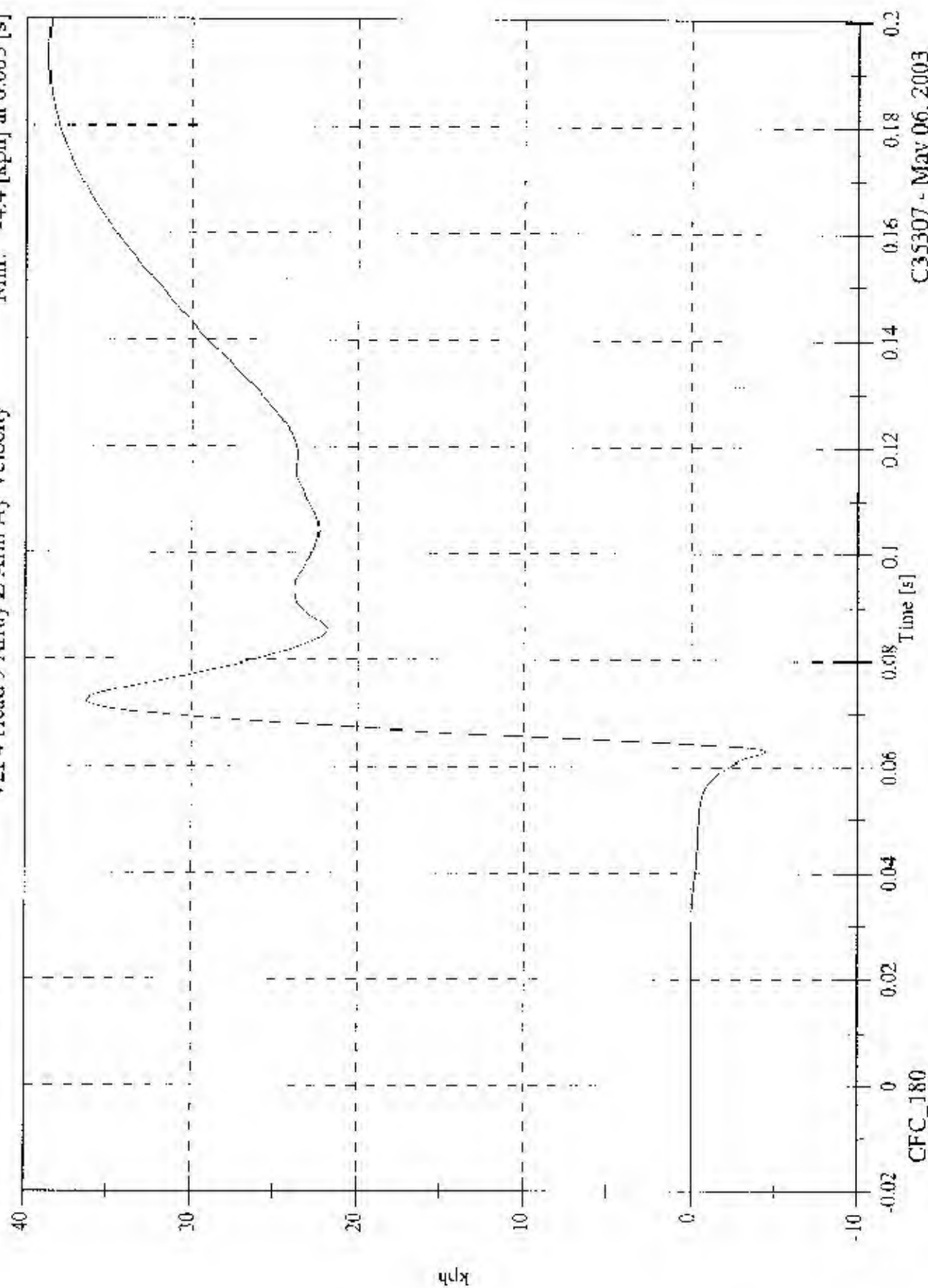
Max: 215.7 [g] at 0.066 [s]
Min: -52.4 [g] at 0.074 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ay Velocity

Max: 38.6 [kph] at 0.193 [s]
Min: -4.4 [kph] at 0.063 [s]

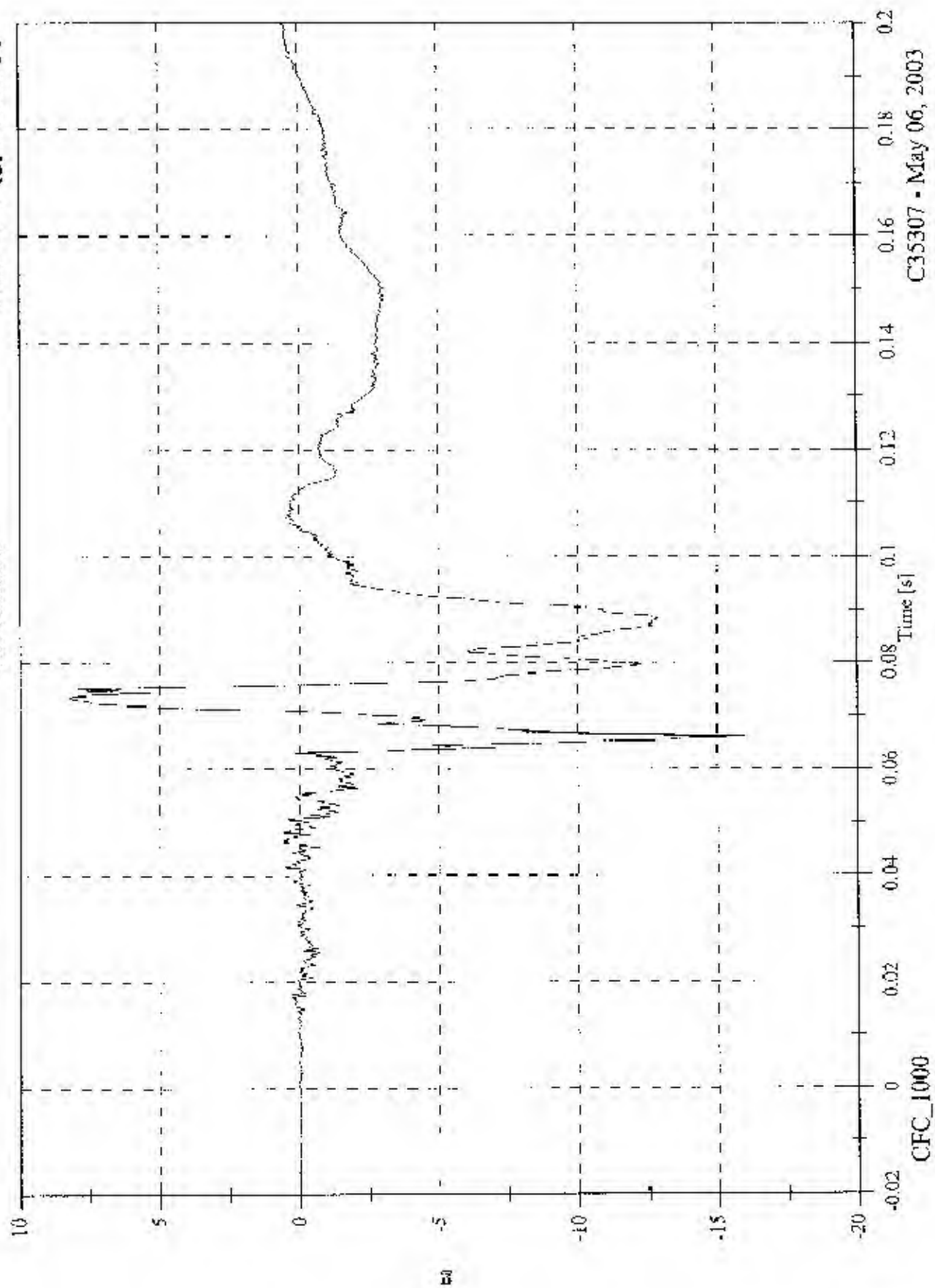


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Max: 8.4 [g] at 0.073 [s]
Min: -16.1 [g] at 0.066 [s]

V2P4 Head x

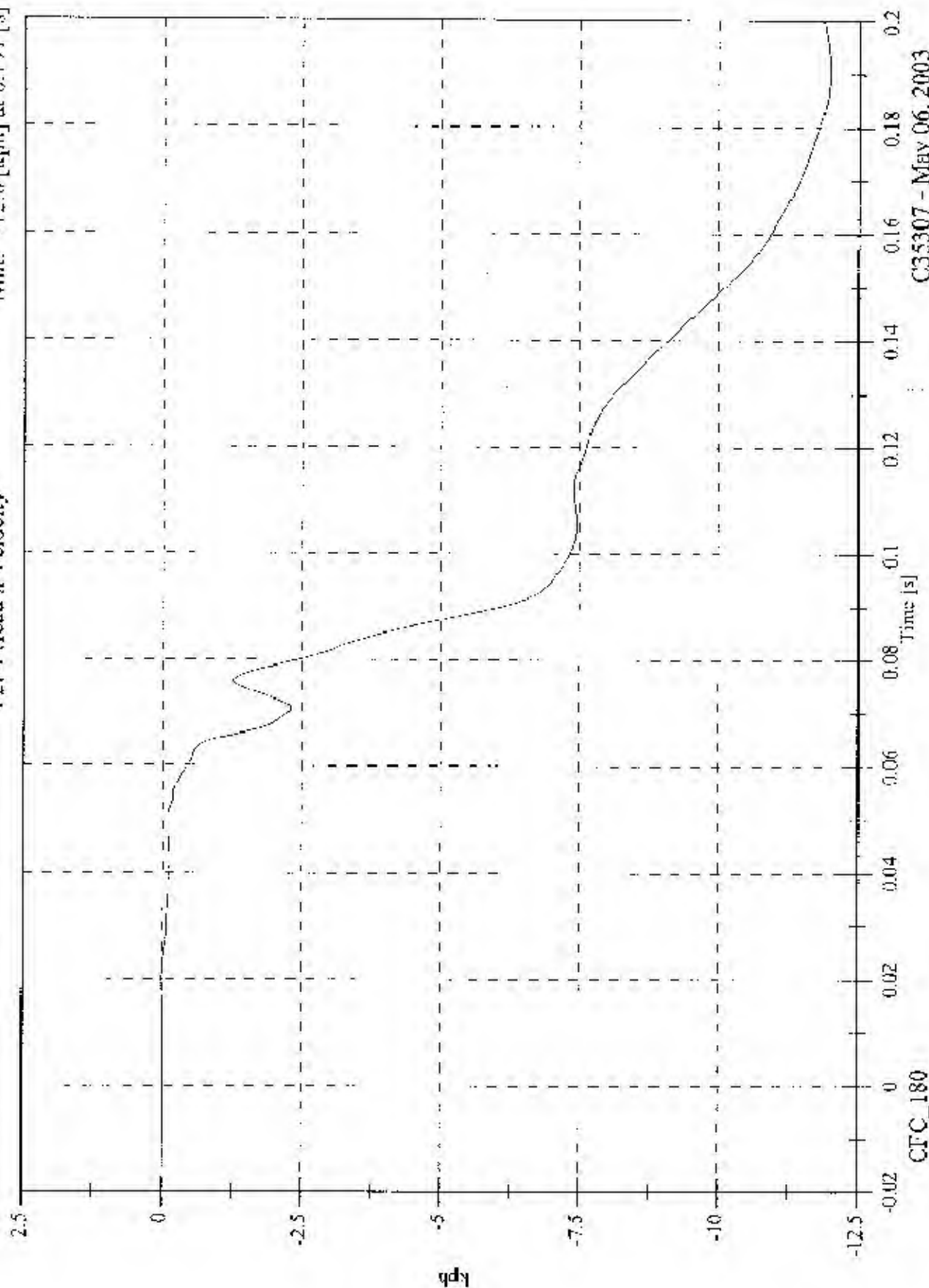


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.0 [kph] at 0.018 [s]
 Min: -12.0 [kph] at 0.191 [s]

V2P4 Head x Velocity

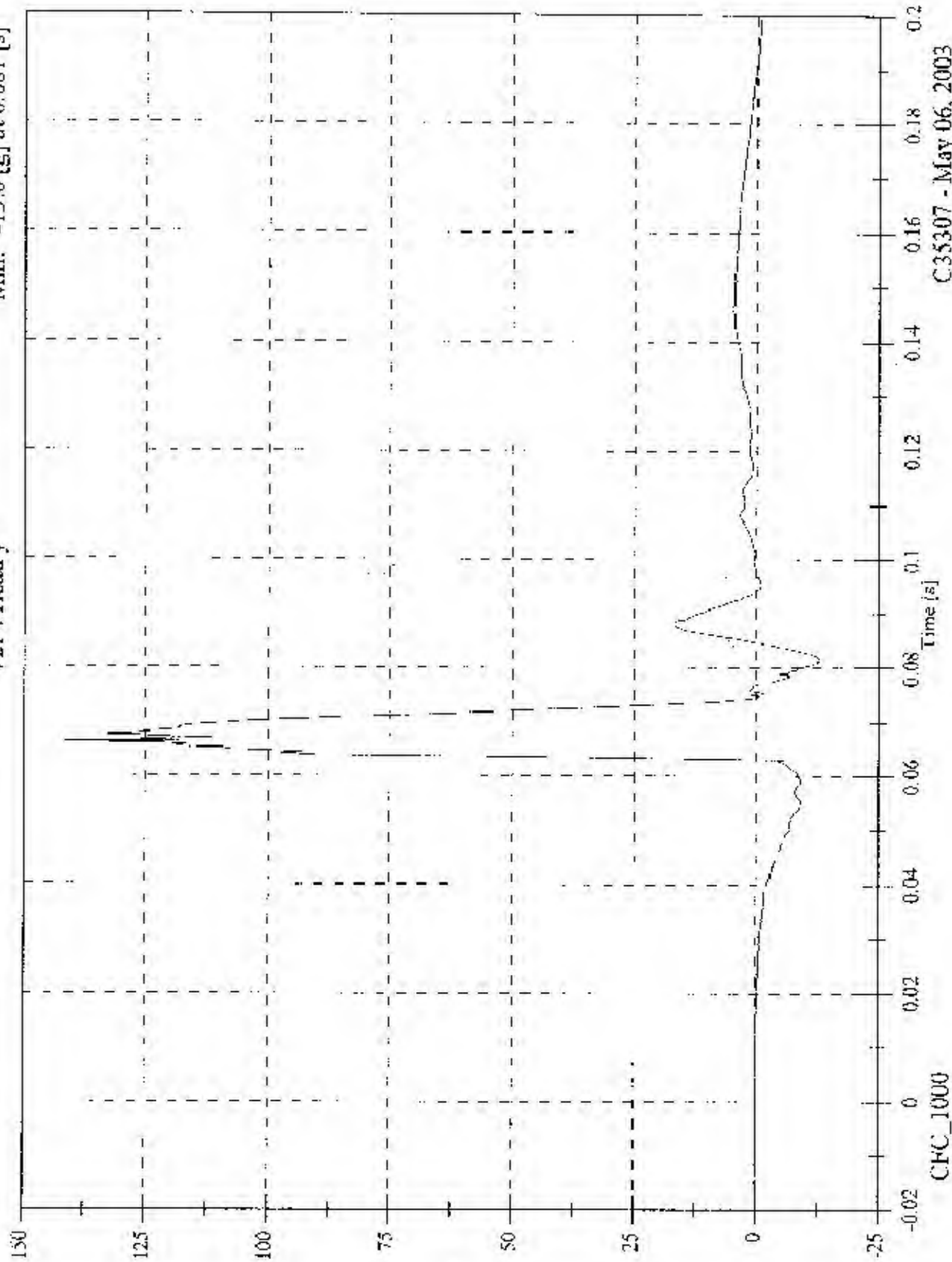


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Max: 141.7 [g] at 0.066 [s]
Min: -13.0 [g] at 0.081 [s]

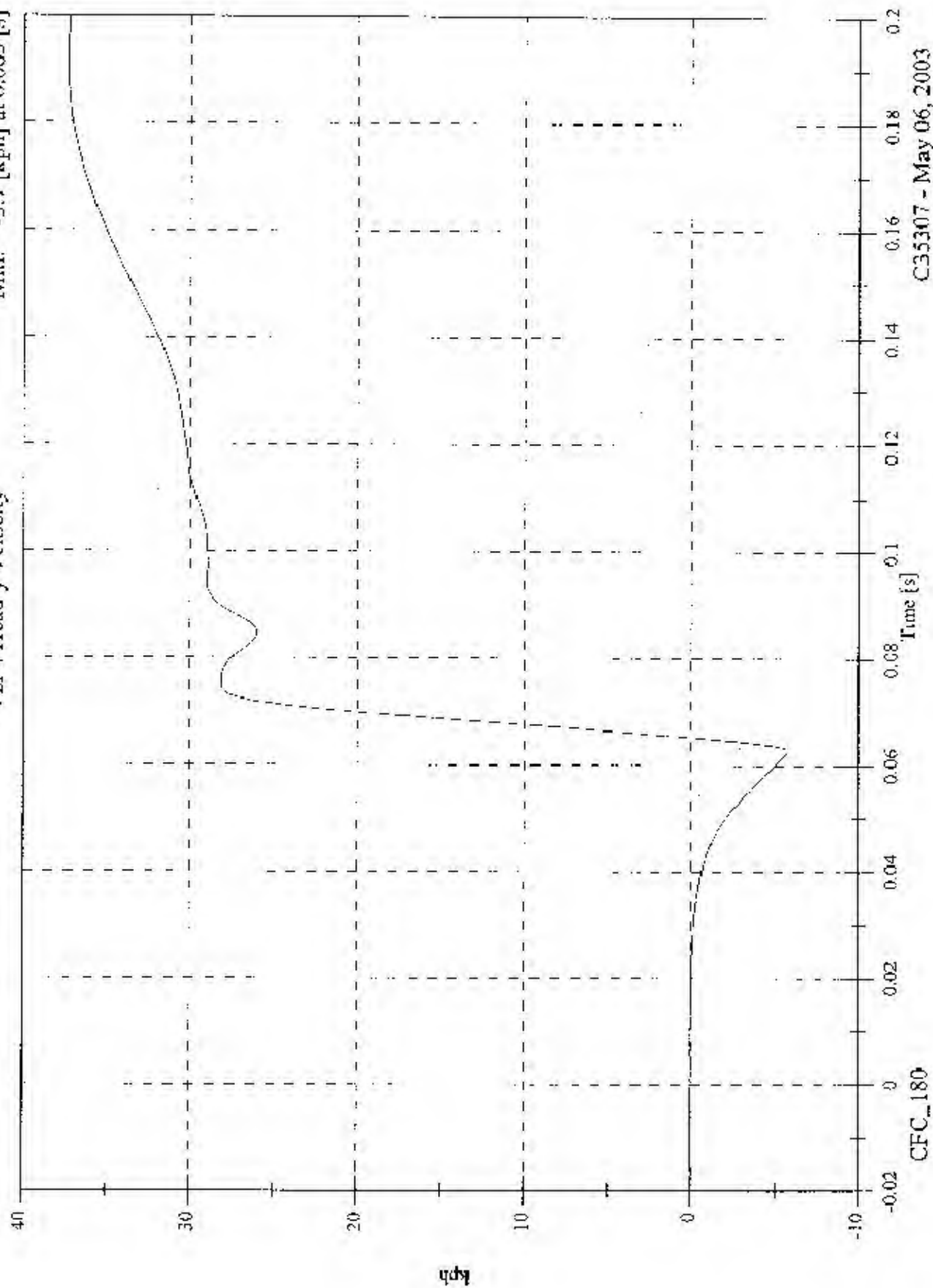
V2P4 Head y



2003 FNVSS 214D Test 8 2003 Honda Element

V2P4 Head y Velocity

Max: 37.4 [kph] at 0.191 [s]
Min: -5.7 [kph] at 0.063 [s]

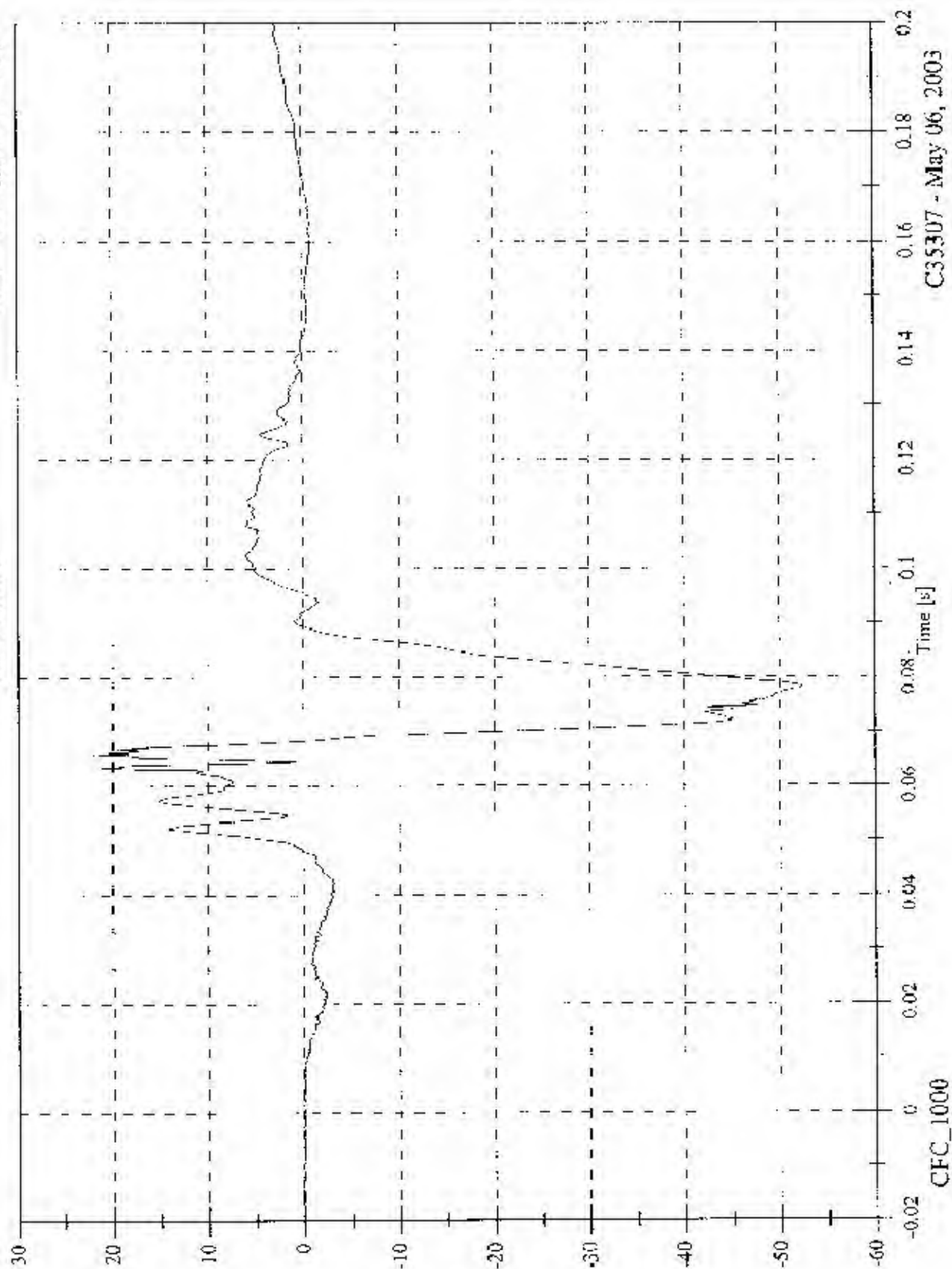


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head z

Max: 22.1 [g] at 0.066 [s]
Min: -52.4 [g] at 0.078 [s]

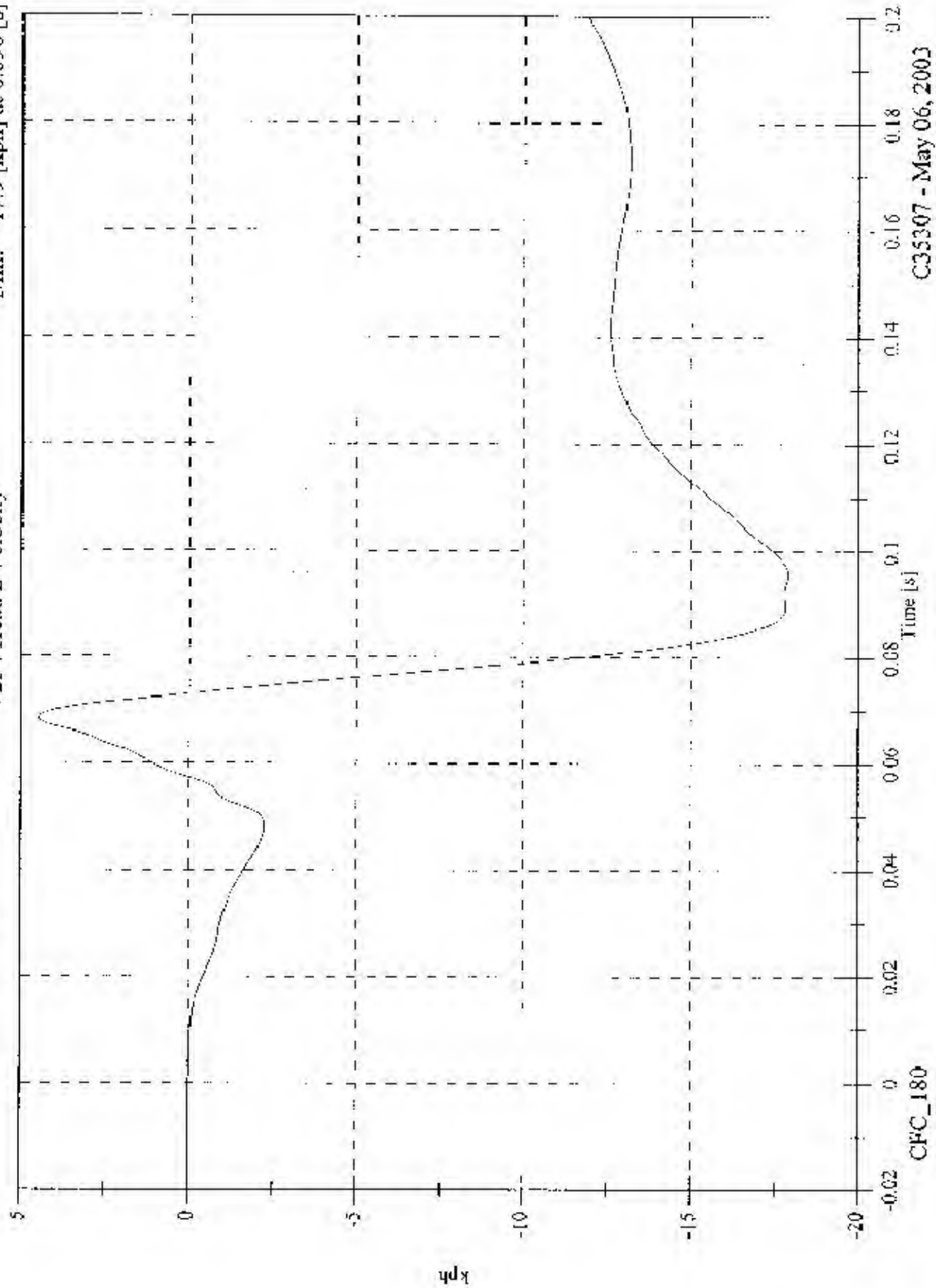


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 4.5 [kph] at 0.068 [s]
 Min: -17.9 [kph] at 0.096 [s]

V2P4 Head z Velocity

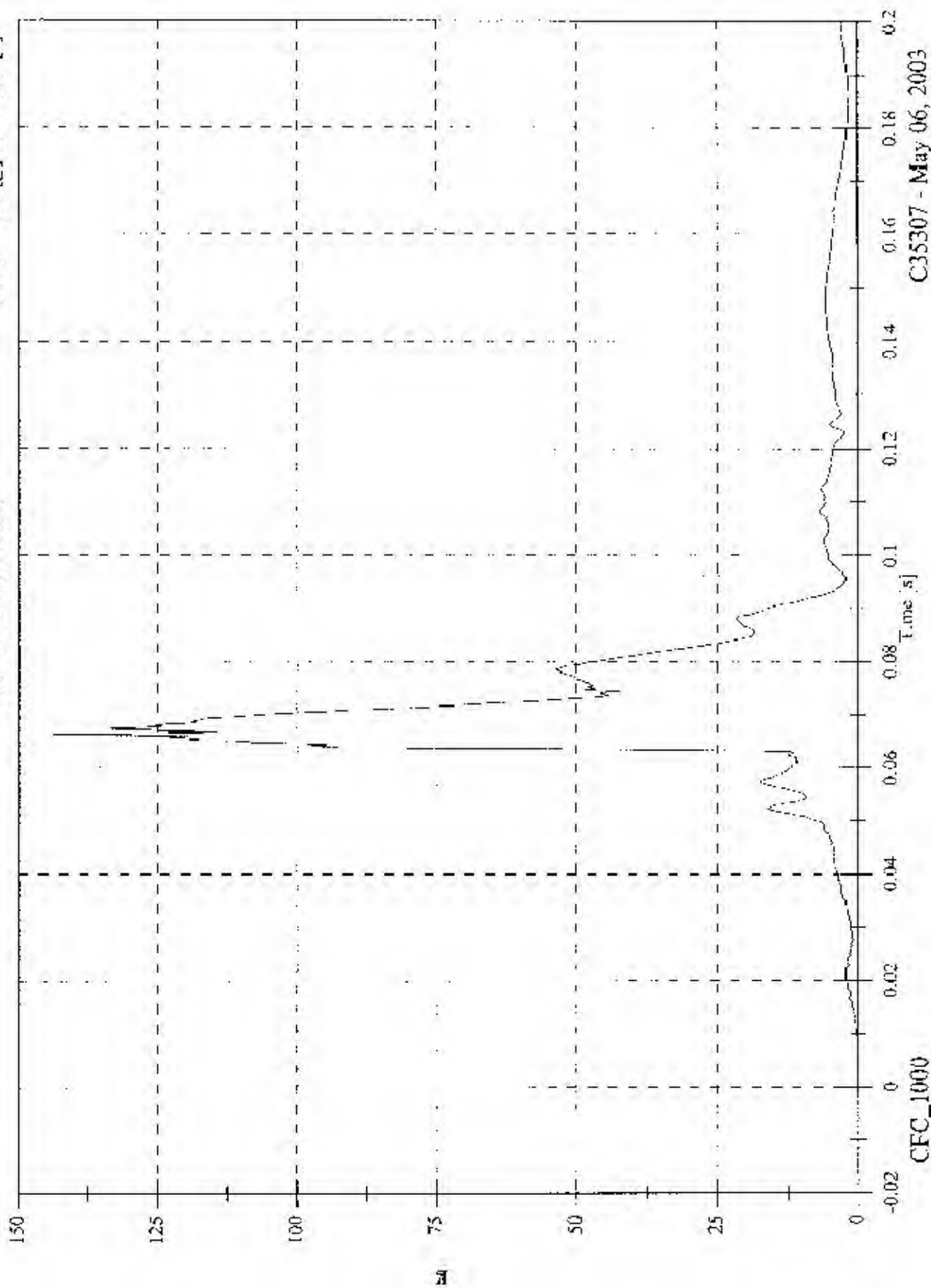


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head Resultant

Max: 143.8 [g] at 0.066 [s]
Min: 0.0 [g] at -0.003 [s]

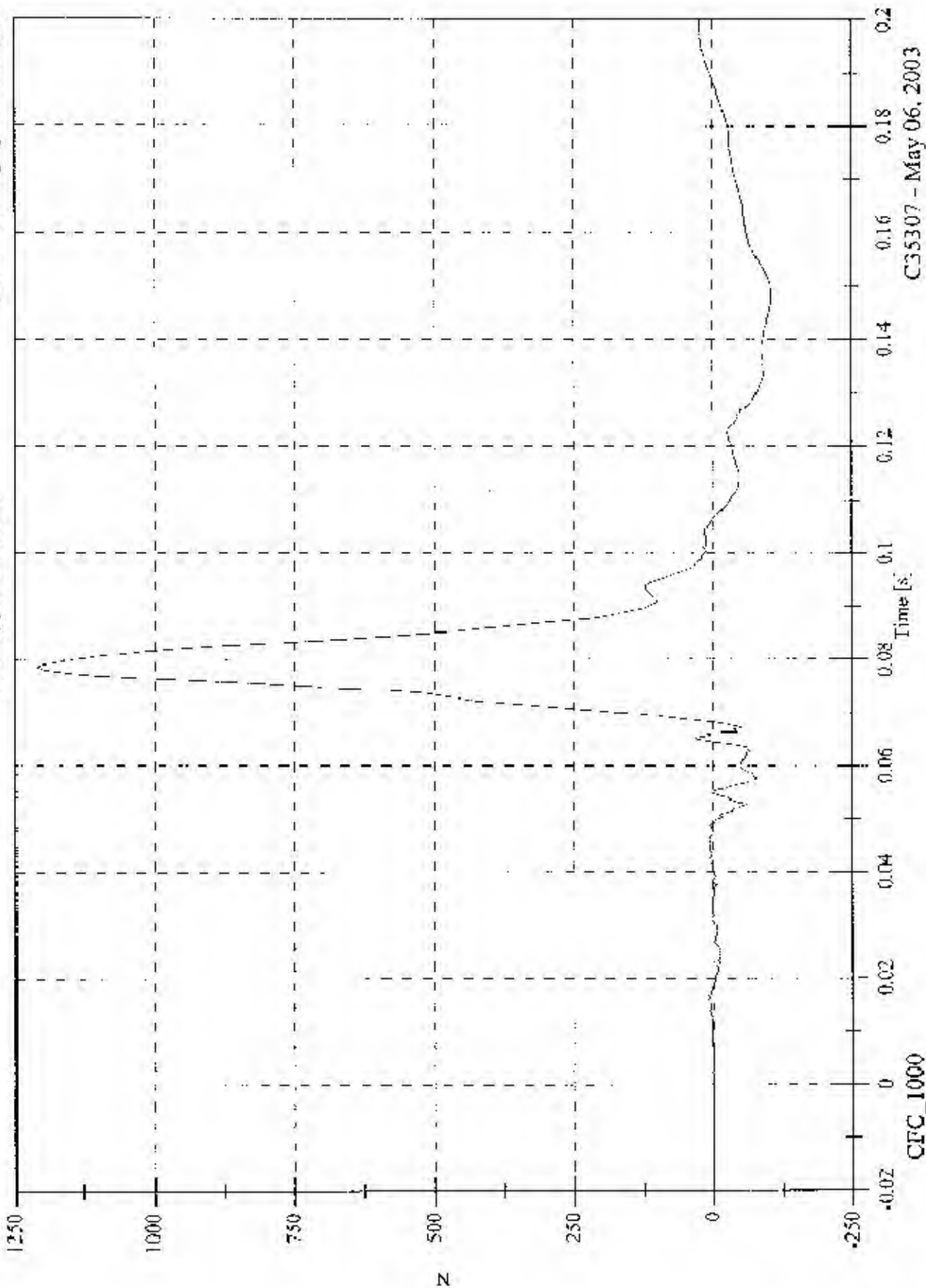


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 1211.3 [N] at 0.079 [s]
Min: -103.6 [N] at 0.148 [s]

V2P4 Upper Neck Fx

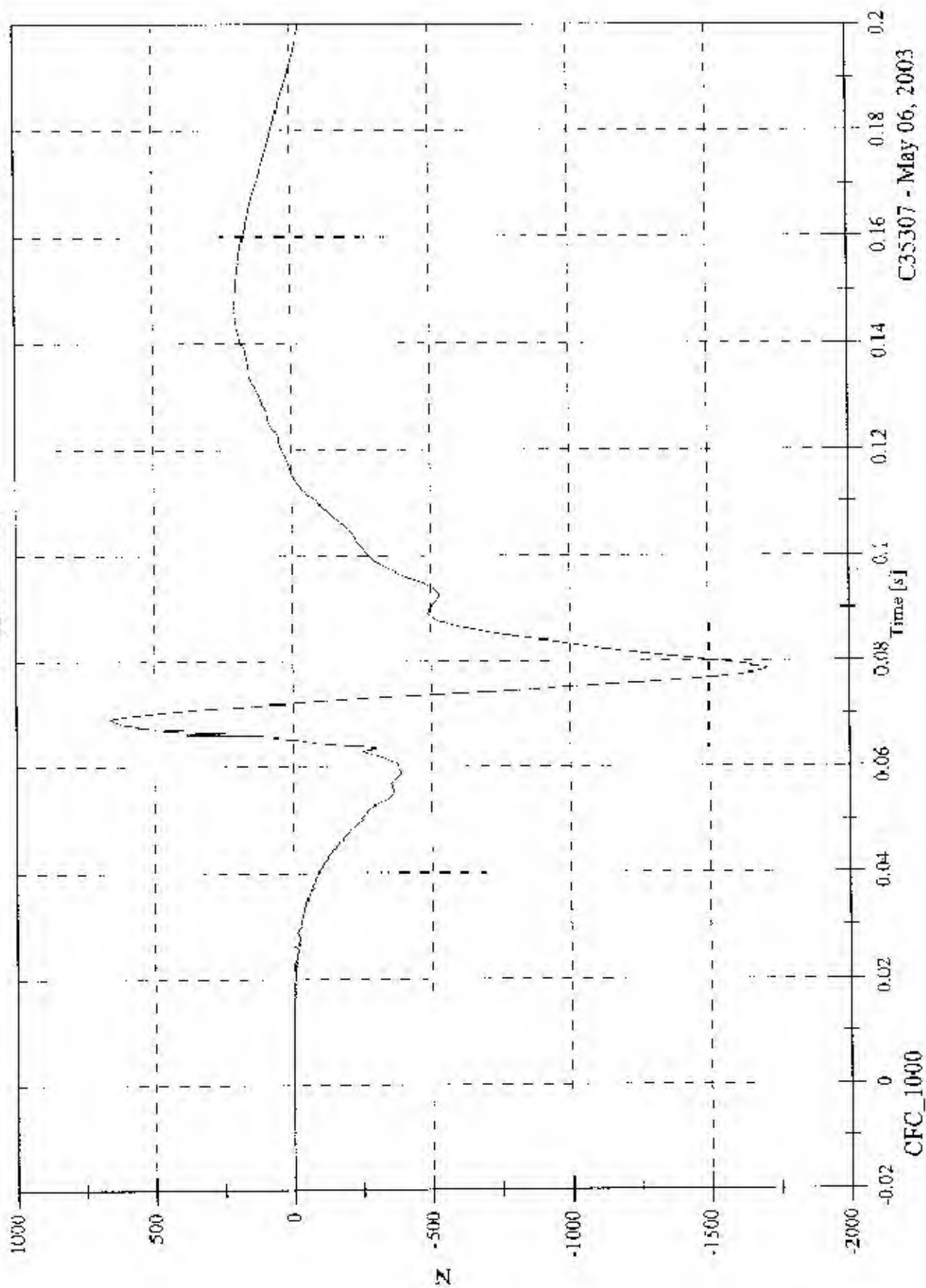


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Neck Fy

Max: 661.9 [N] at 0.069 [s]
Min: -1711.0 [N] at 0.078 [s]



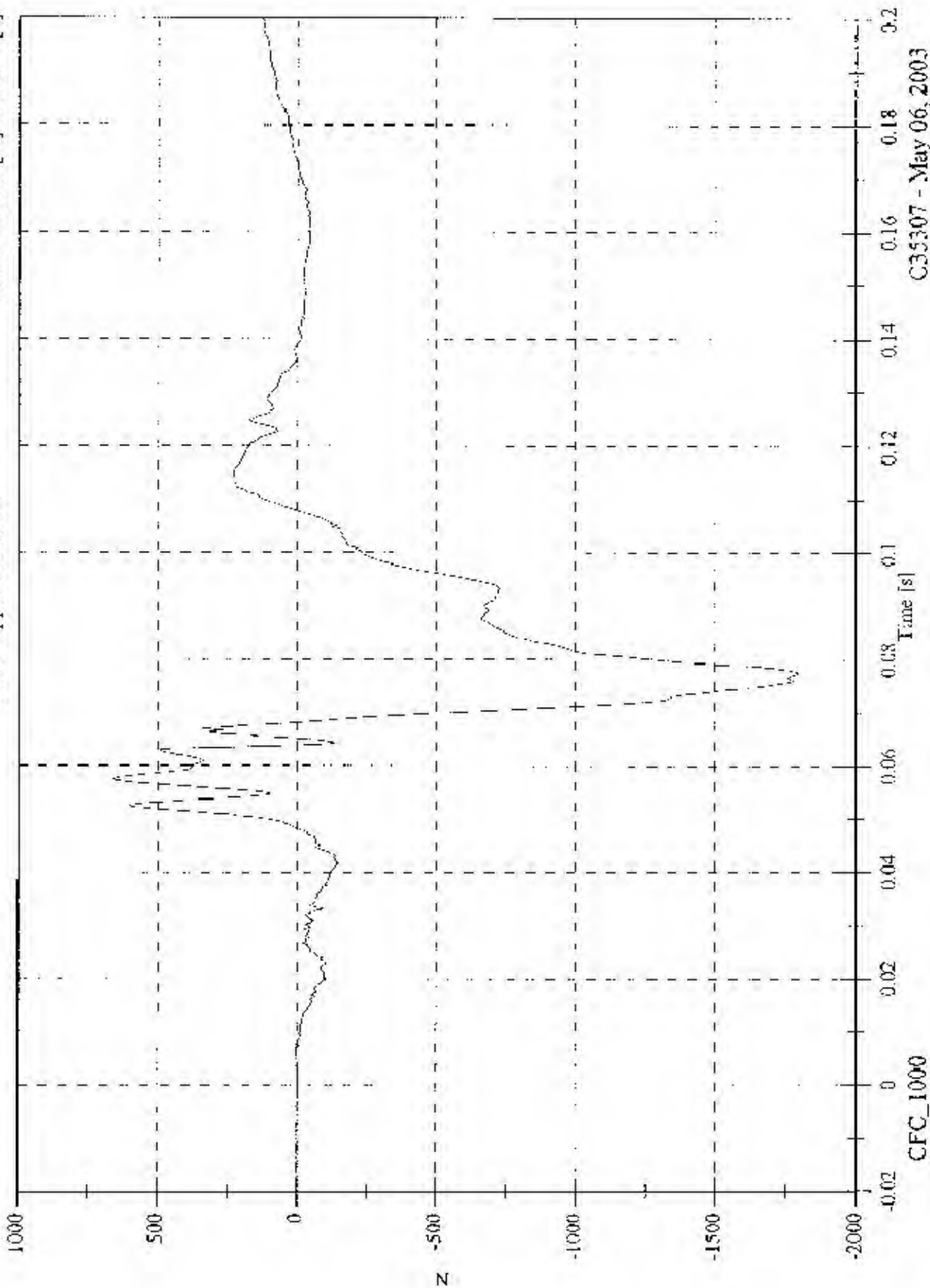
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 659.4 [N] at 0.057 [s]

Min: -1794.5 [N] at 0.077 [s]

V2P4 Upper Neck Fz

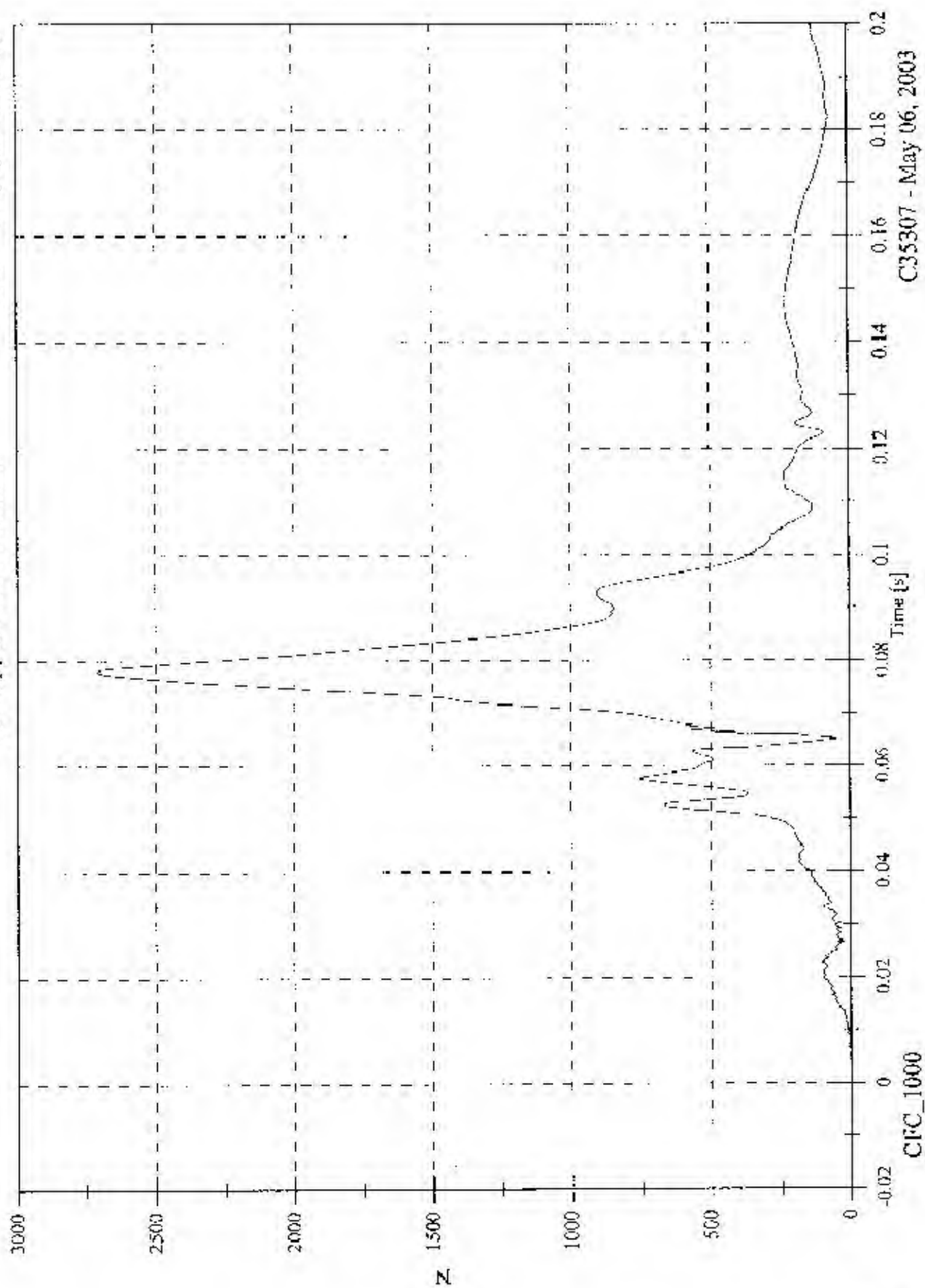


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Neck F Resultant

Max: 2709.9 [N] at 0.078 [s]
Min: 0.1 [N] at -0.003 [s]

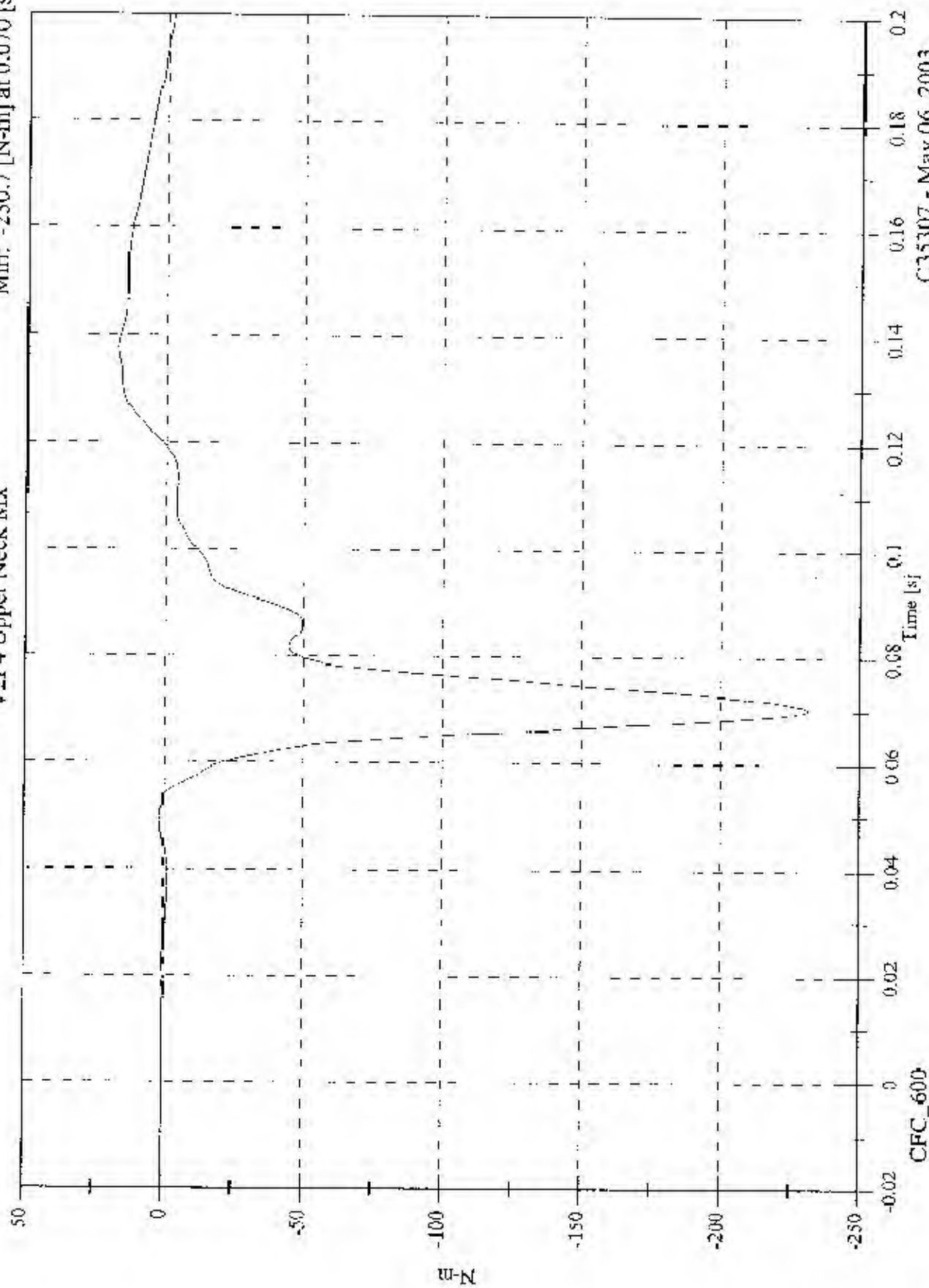


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 17.2 [N-m] at 0.137 [s]
Min: -230.7 [N-m] at 0.070 [s]

V2P4 Upper Neck Mx

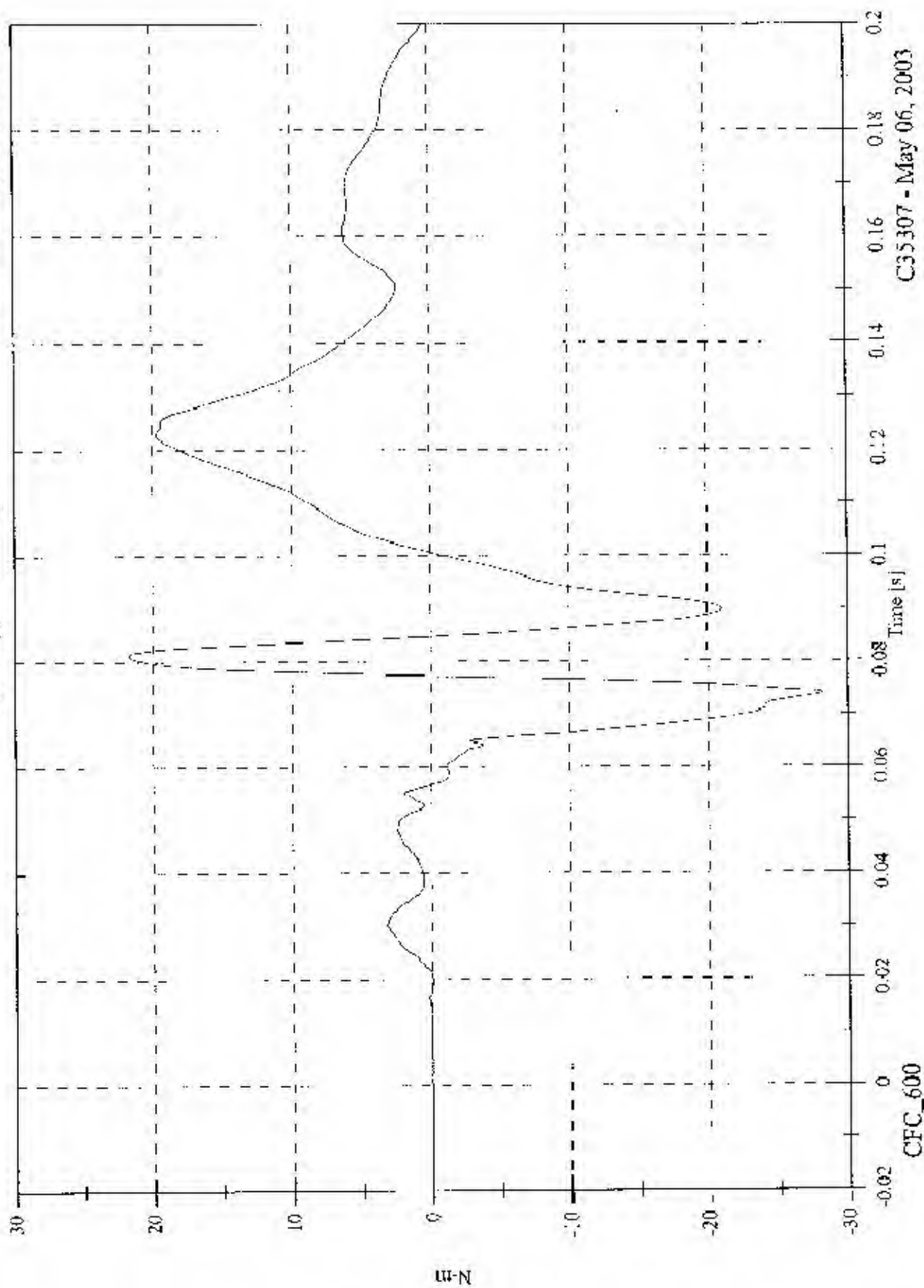


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Neck My

Max: 21.7 [N-m] at 0.081 [s]
Min: -28.2 [N-m] at 0.074 [s]

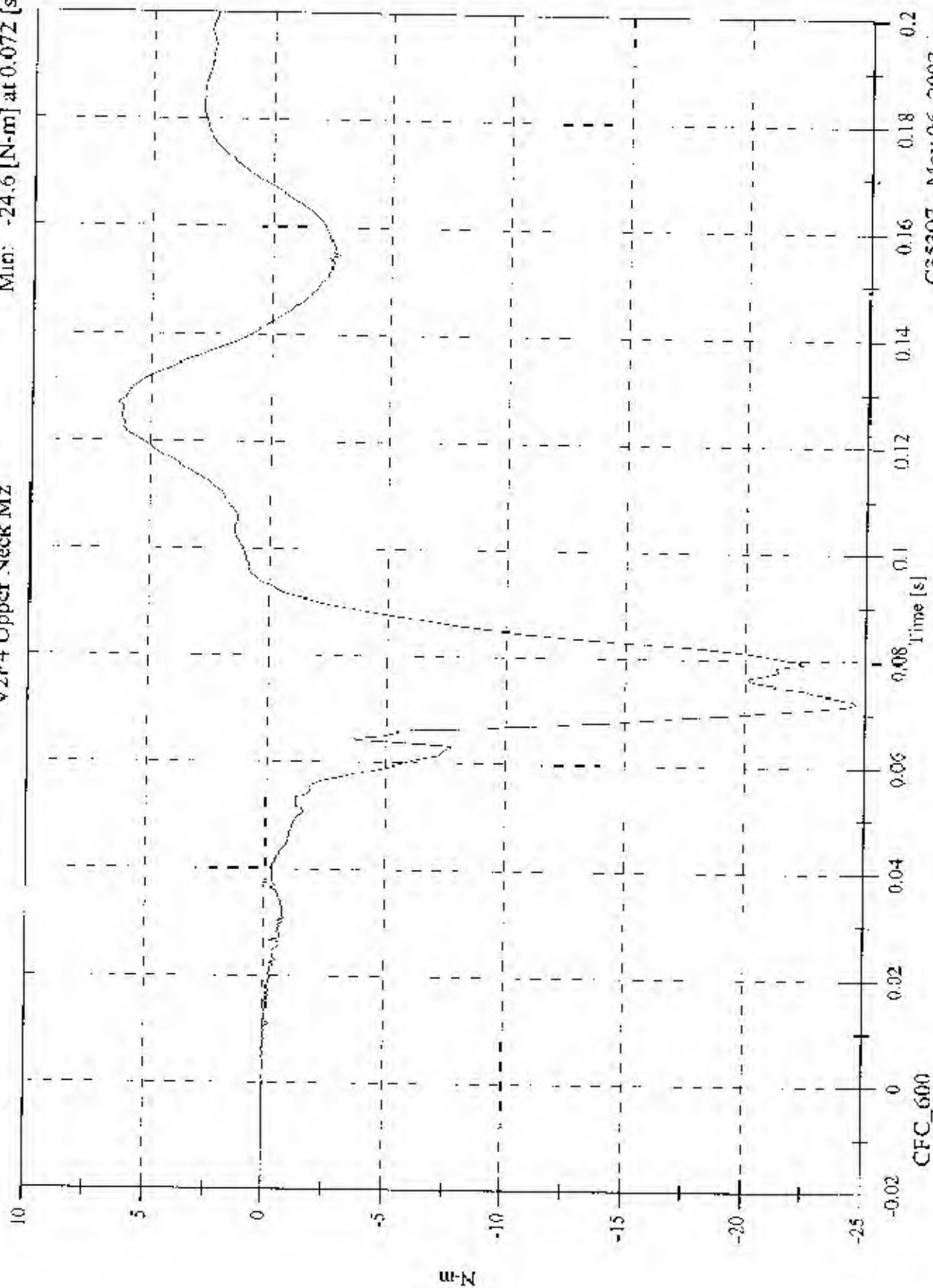


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 6.3 [N-m] at 0.127 [s]
Min: -24.6 [N-m] at 0.072 [s]

V2P4 Upper Neck Mz

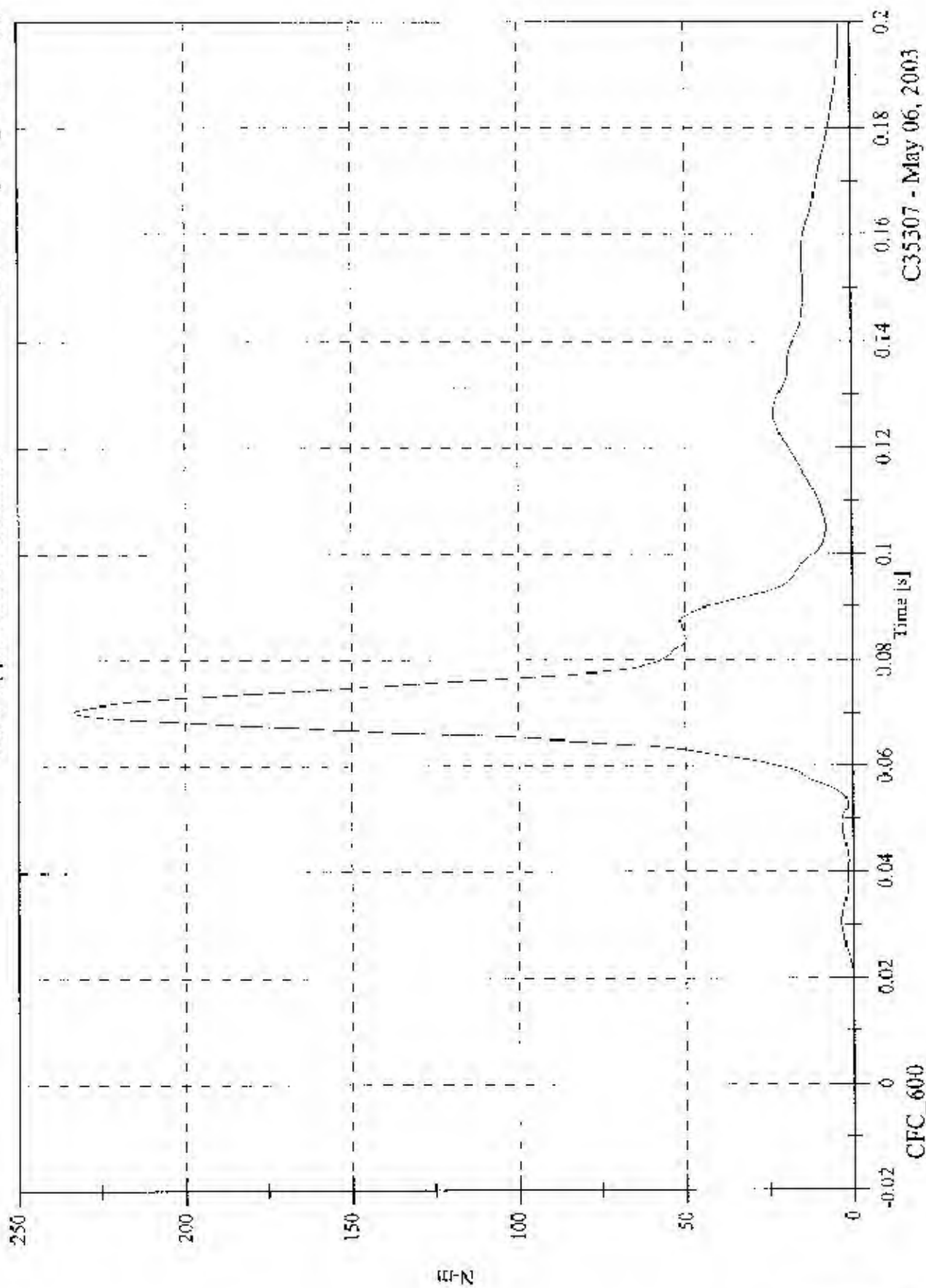


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 232.9 [N-m] at 0.070 [s]
 Min: 0.0 [N-m] at 0.003 [s]

V2P4 Upper Neck M Resultant

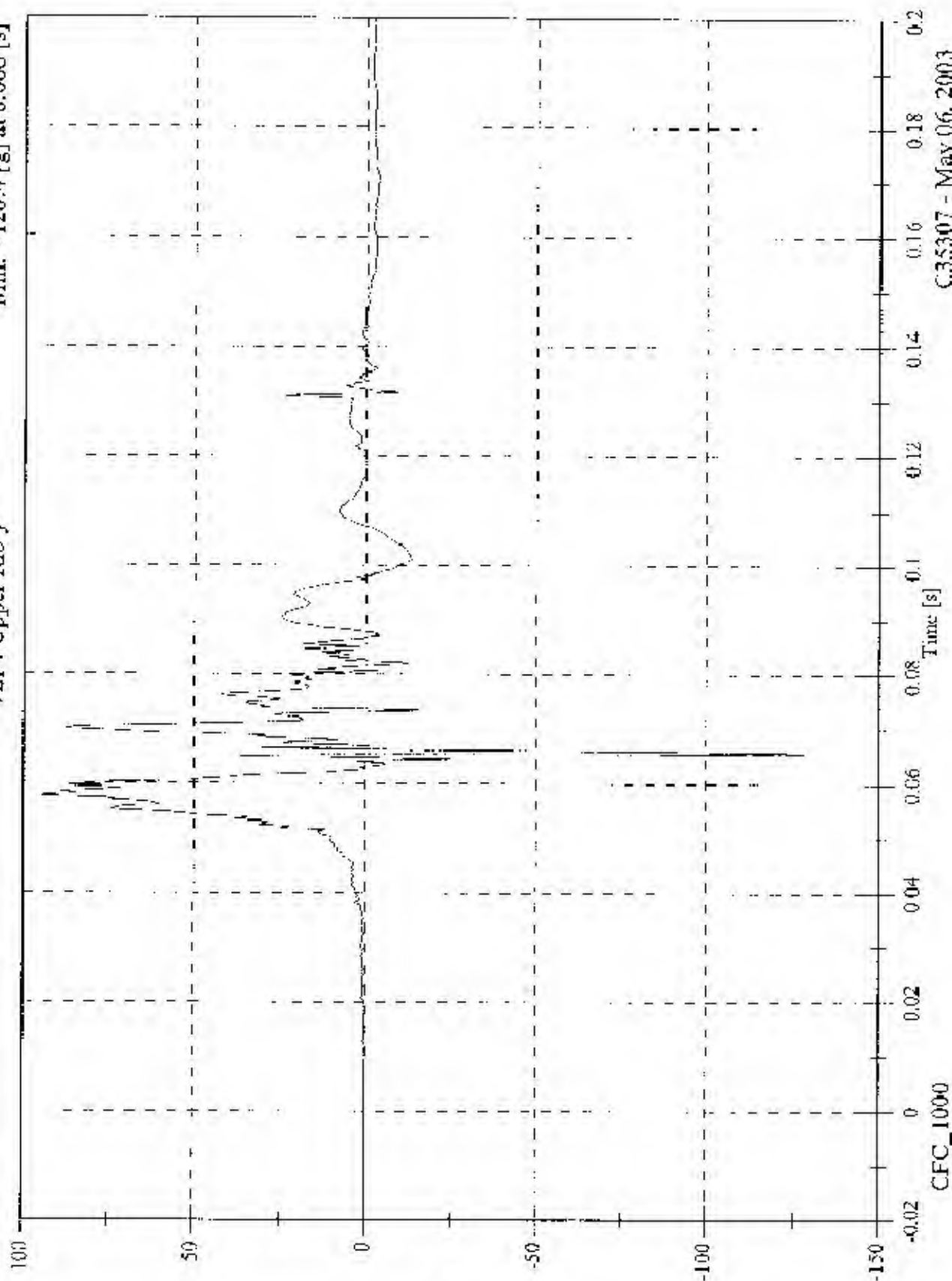


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Max: 95.7 [g] at 0.058 [s]
Min: -128.4 [g] at 0.066 [s]

V2P4 Upper Rib y

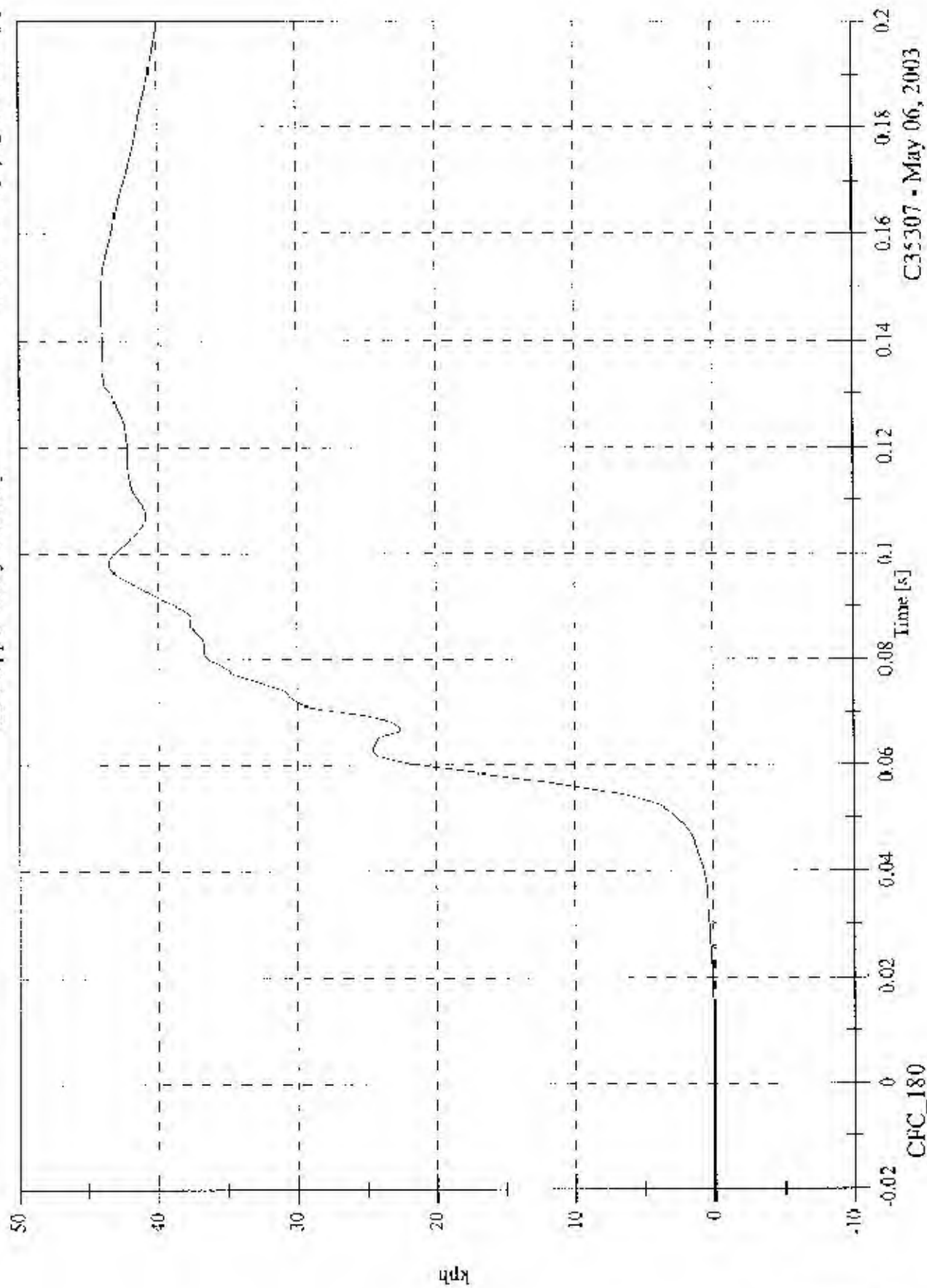


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 44.0 [kph] at 0.147 [s]
Min: -0.0 [kph] at -0.016 [s]

V2P4 Upper Rib y Velocity



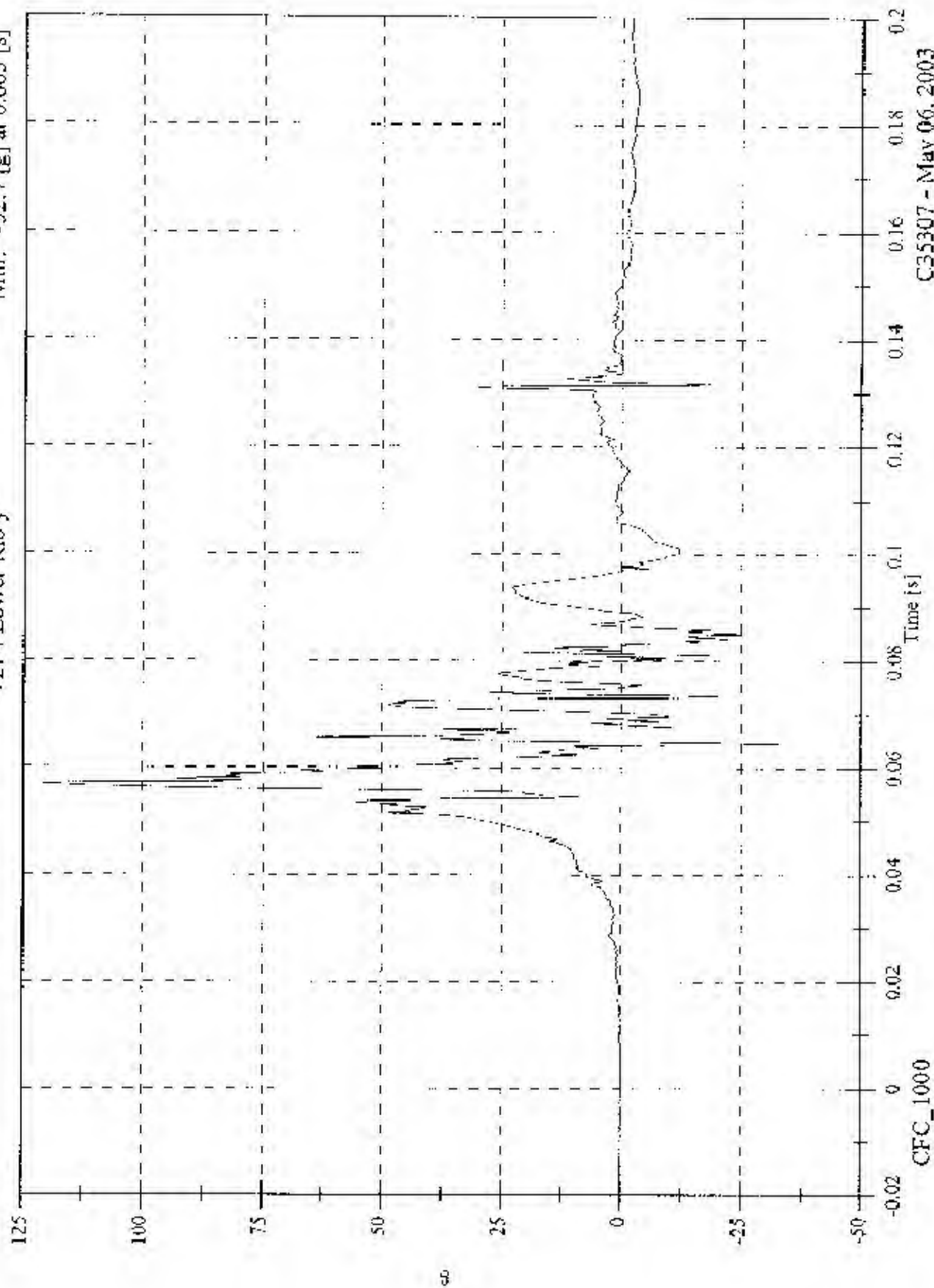
CFC_180

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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 120.7 [g] at 0.057 [s]
Min: -32.7 [g] at 0.065 [s]

V2P4 Lower Rib y

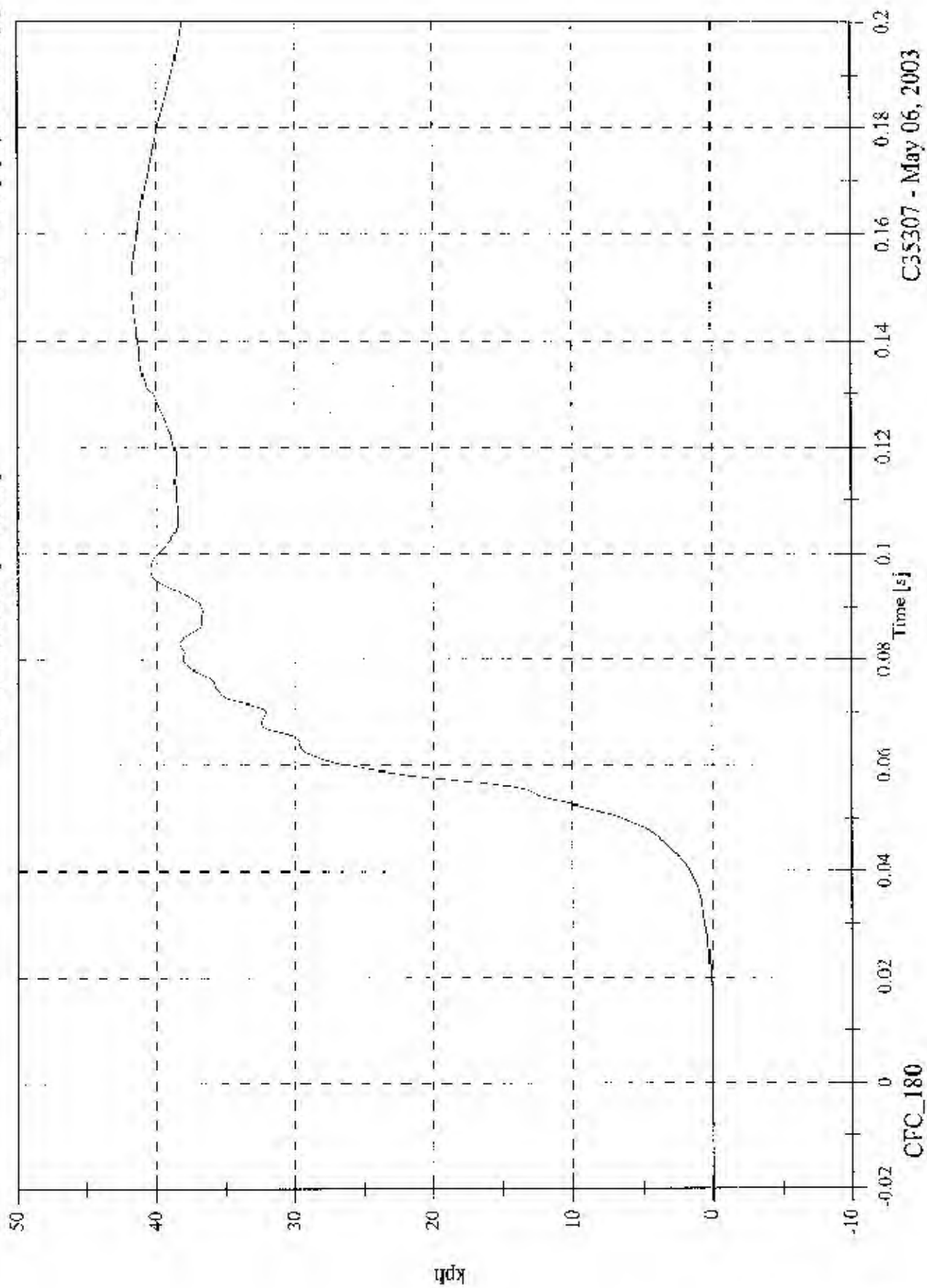


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Lower Rib y Velocity

Max: 41.7 [kph] at 0.151 [s]
Min: -0.0 [kph] at -0.015 [s]

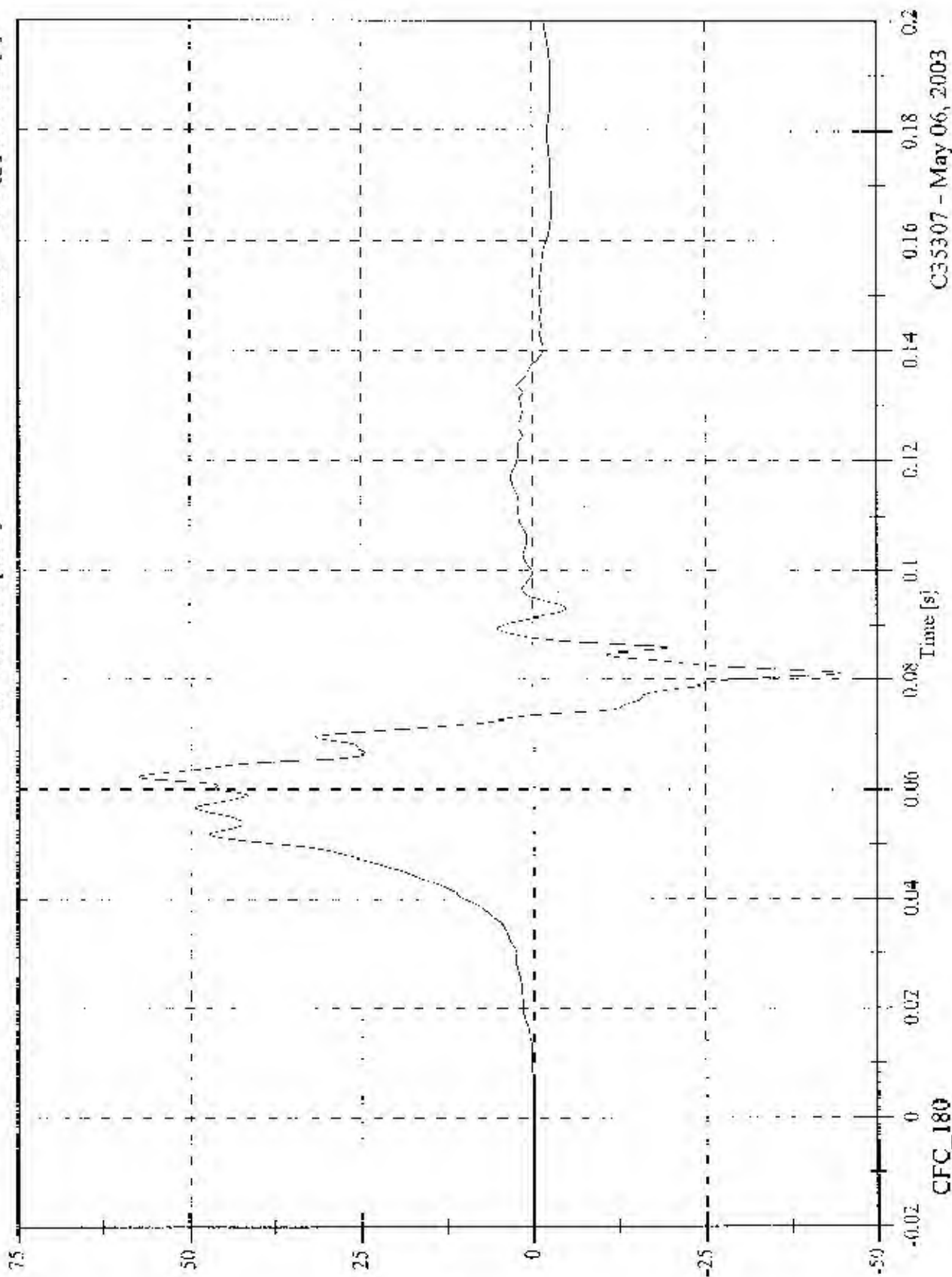


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2003 FMYSS 214D Test 8 2003 Honda Element

Max: 57.4 [g] at 0.062 [s]
Min: -44.6 [g] at 0.081 [s]

V2P4 Lower Spine y

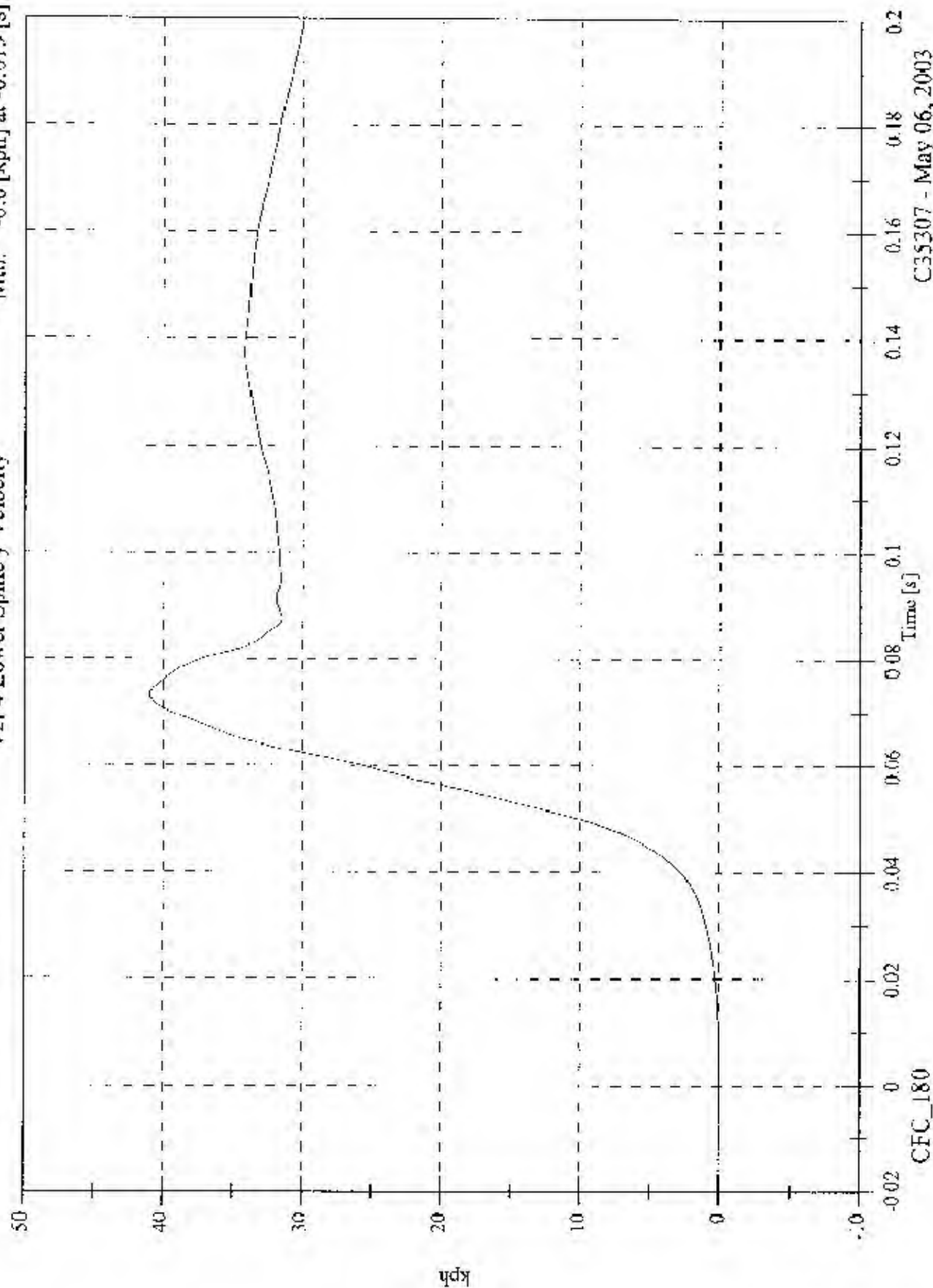


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Lower Spine y Velocity

Max: 41.0 [kph] at 0.073 [s]
Min: -0.0 [kph] at -0.015 [s]



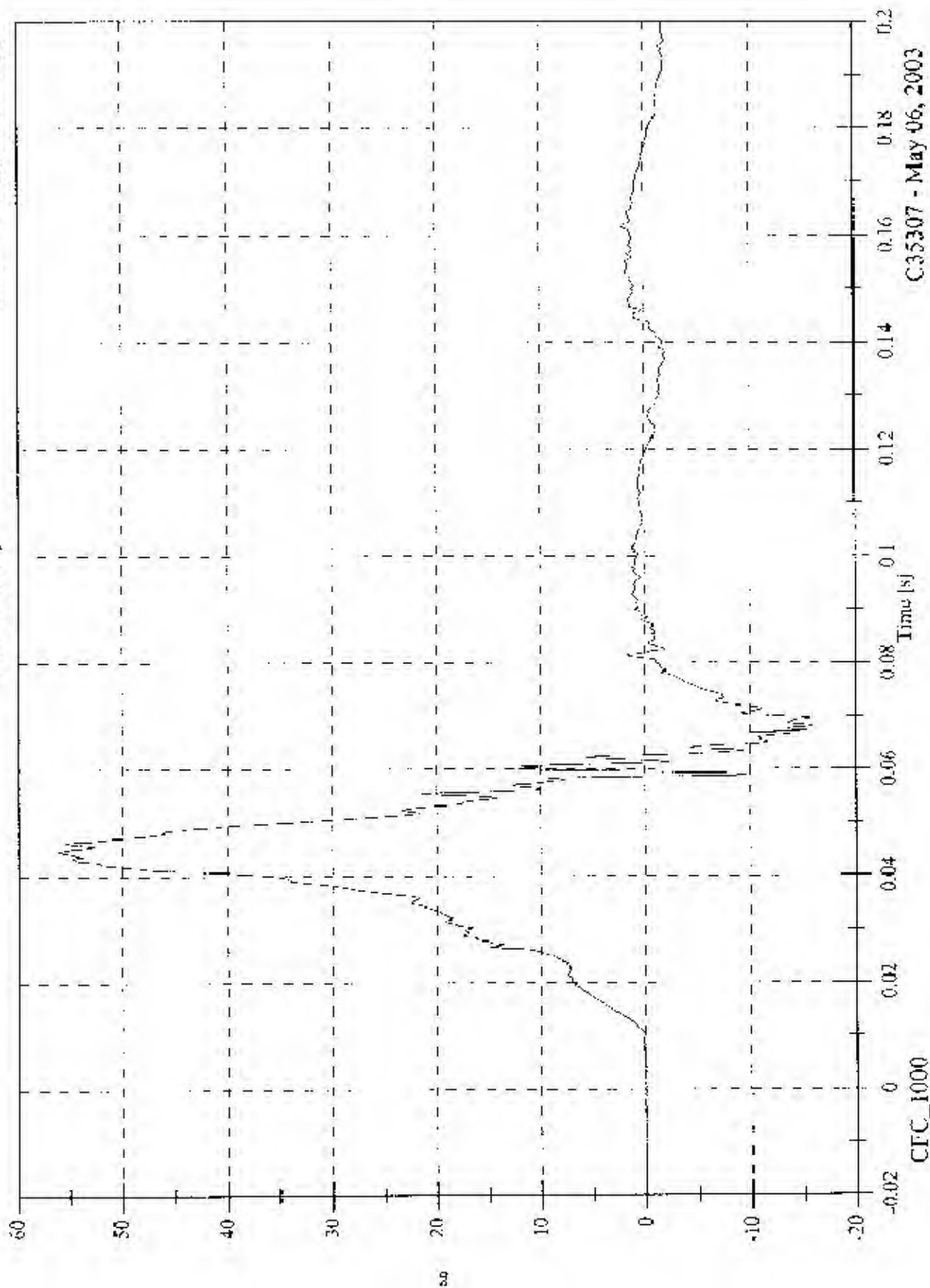
CFC_180

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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 56.1 [g] at 0.045 [s]
Min: -16.0 [g] at 0.068 [s]

V2P4 Pelvic y

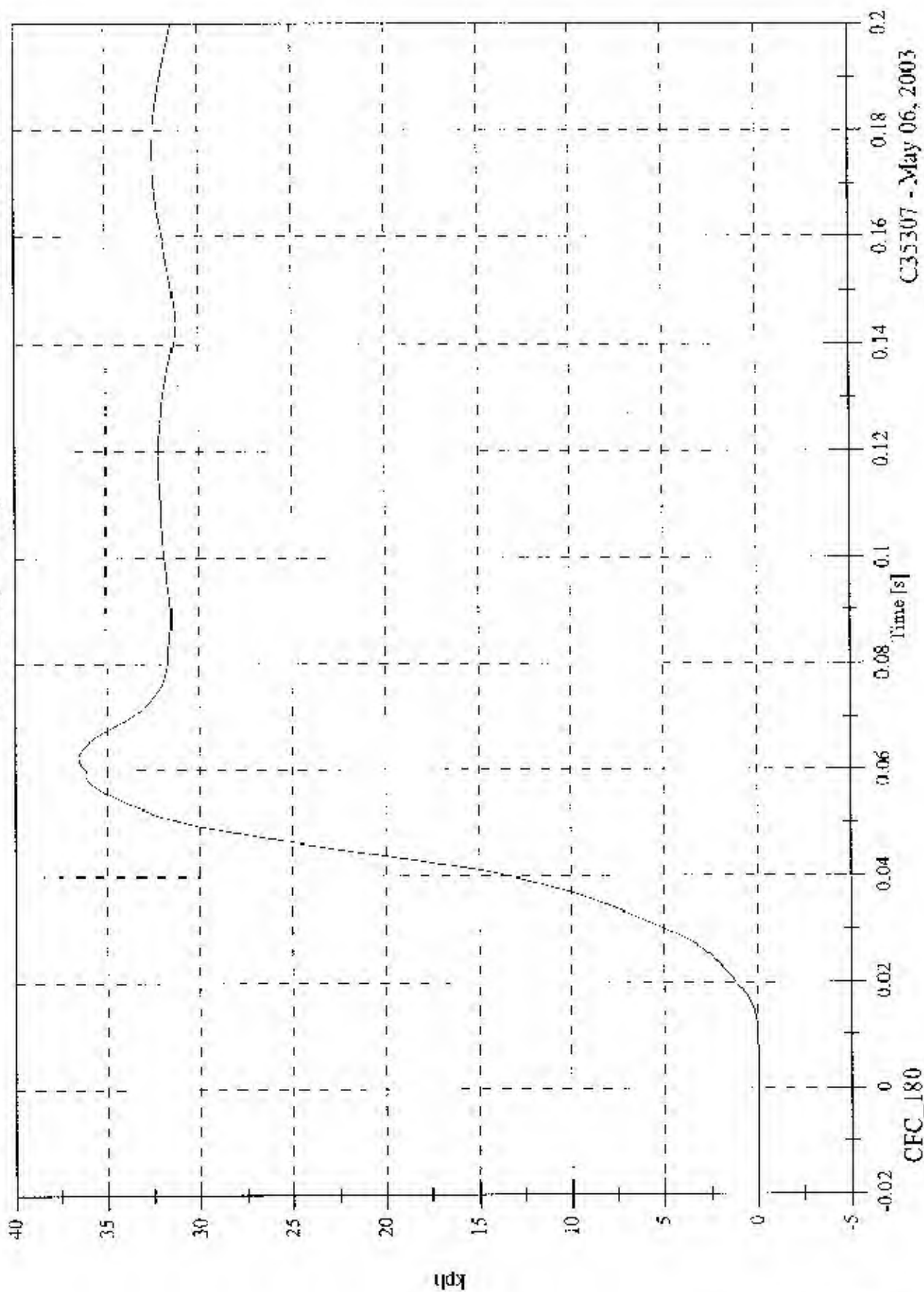


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Pelvic y Velocity

Max: 36.6 [kph] at 0.062 [s]
 Min: -0.0 [kph] at -0.020 [s]

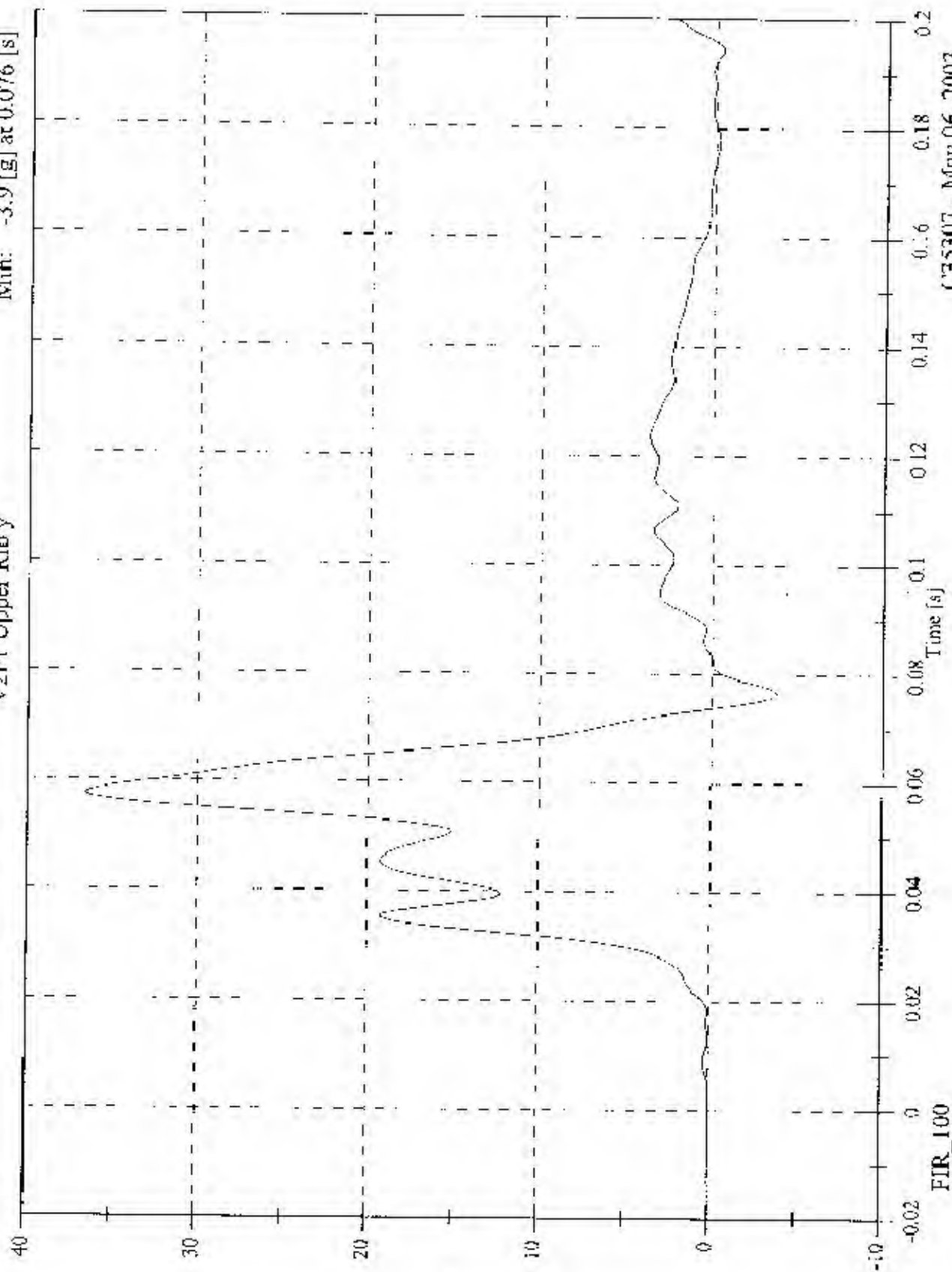


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 36.7 [g] at 0.057 [s]
Min: -3.9 [g] at 0.076 [s]

V2P1 Upper Rib y

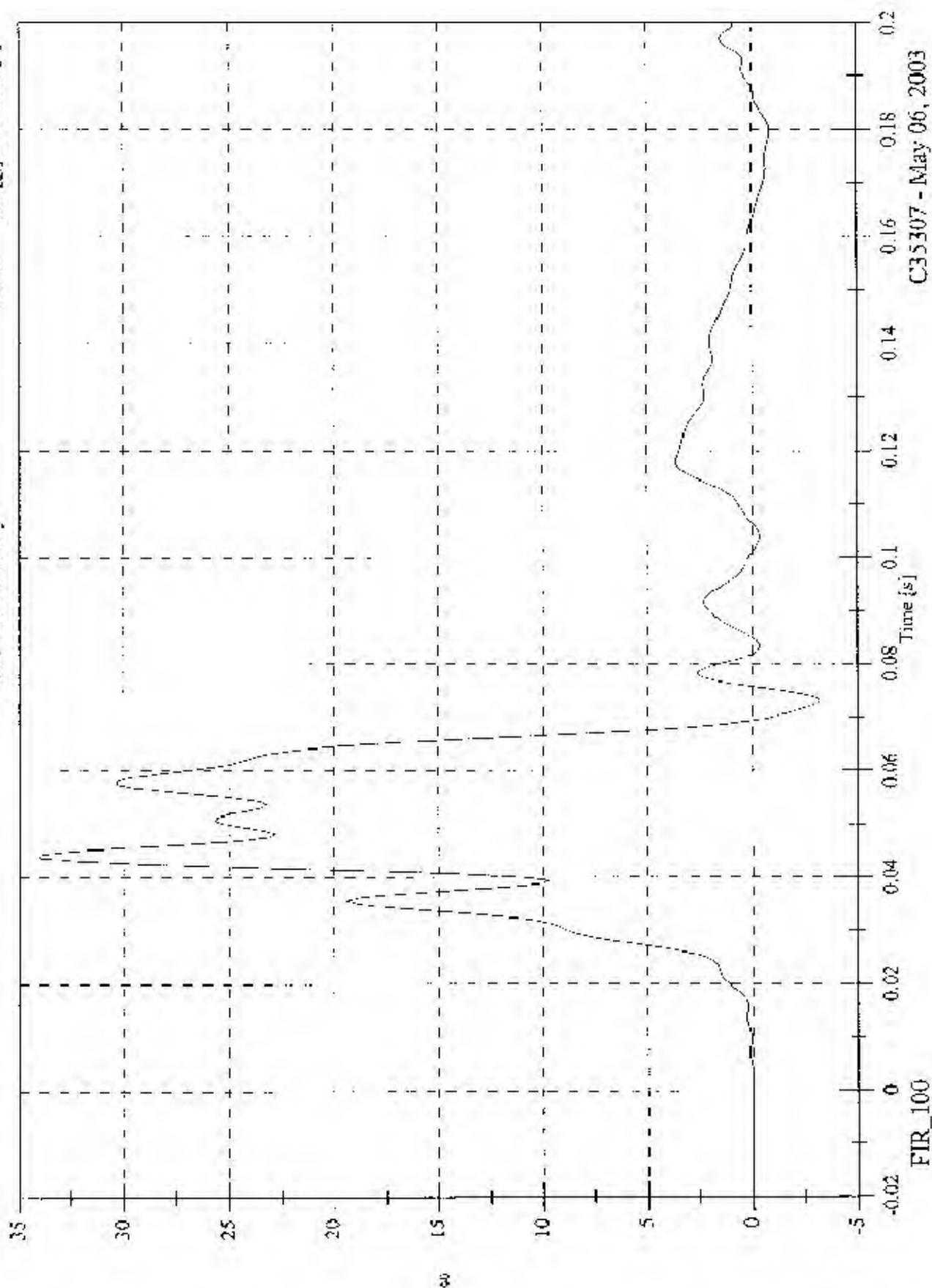


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Rib y

Max: 34.0 [g] at 0.044 [s]
Min: -3.2 [g] at 0.073 [s]

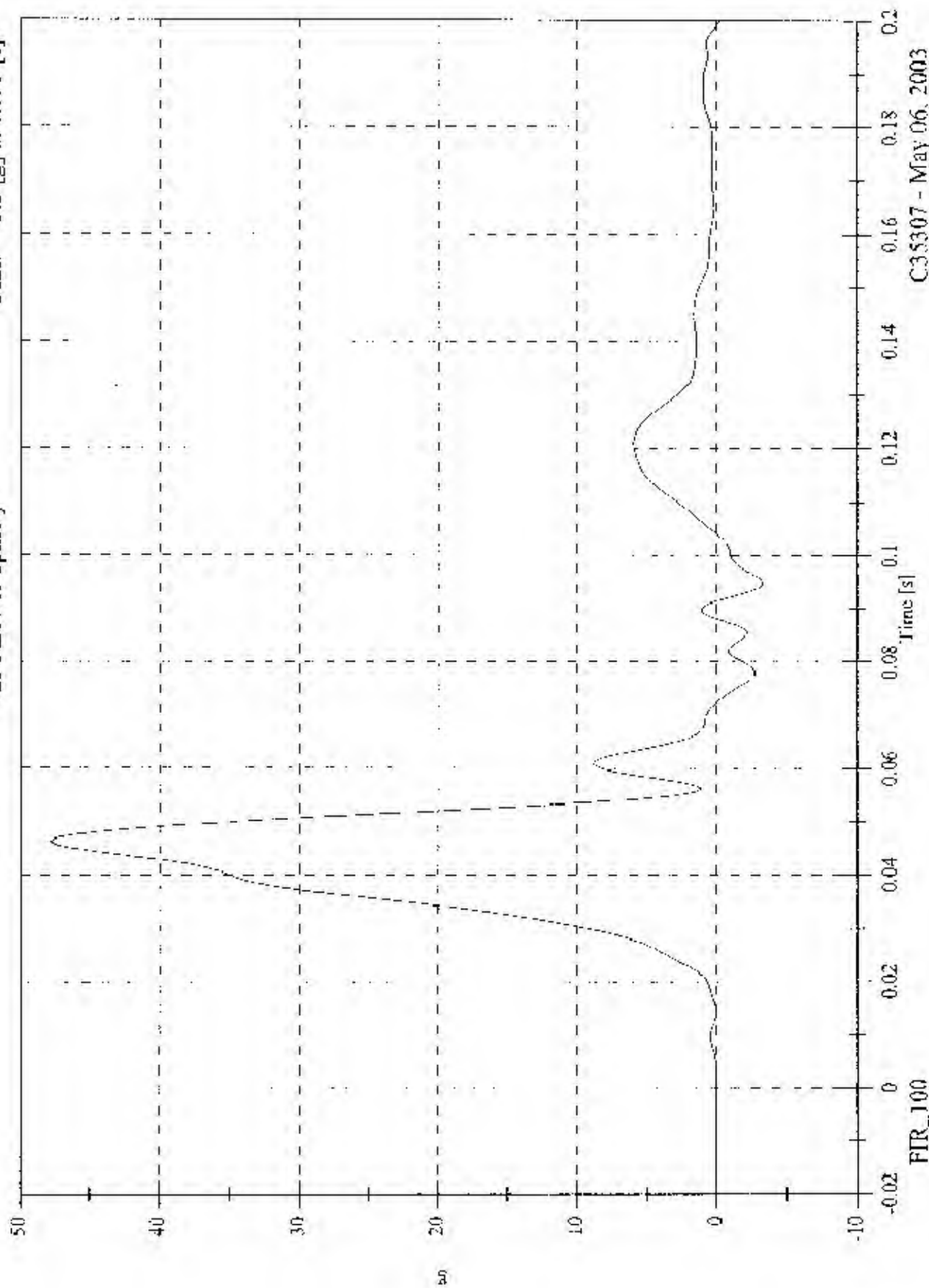


C35307 - May 06, 2003

2003 FVSVSS 214D Test 8 2003 Honda Element

Max: 47.8 [g] at 0.046 [s]
Min: -3.3 [g] at 0.095 [s]

V2P1 Lower Spine y

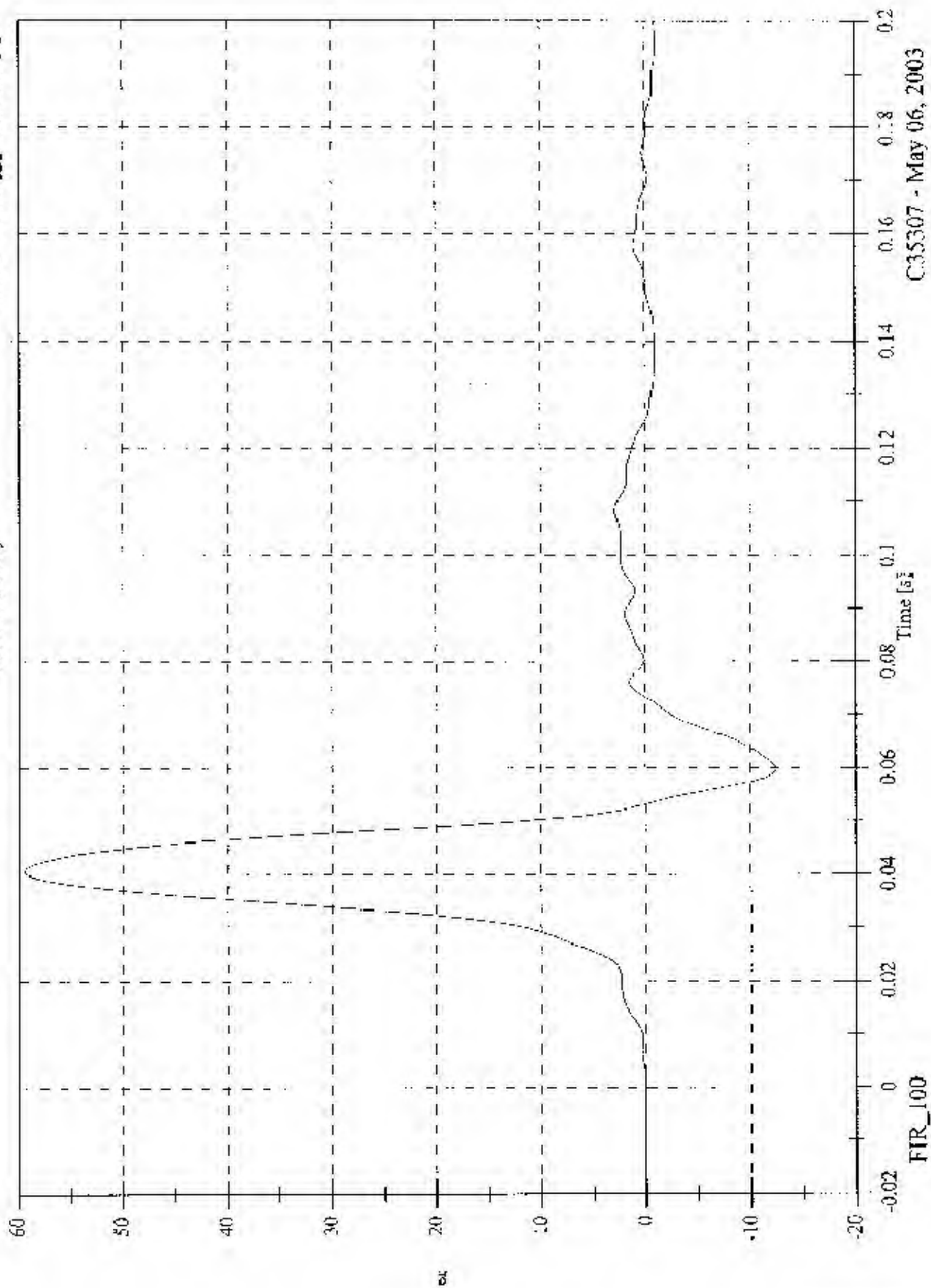


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 59.4 [g] at 0.041 [s]
Min: -12.4 [g] at 0.060 [s]

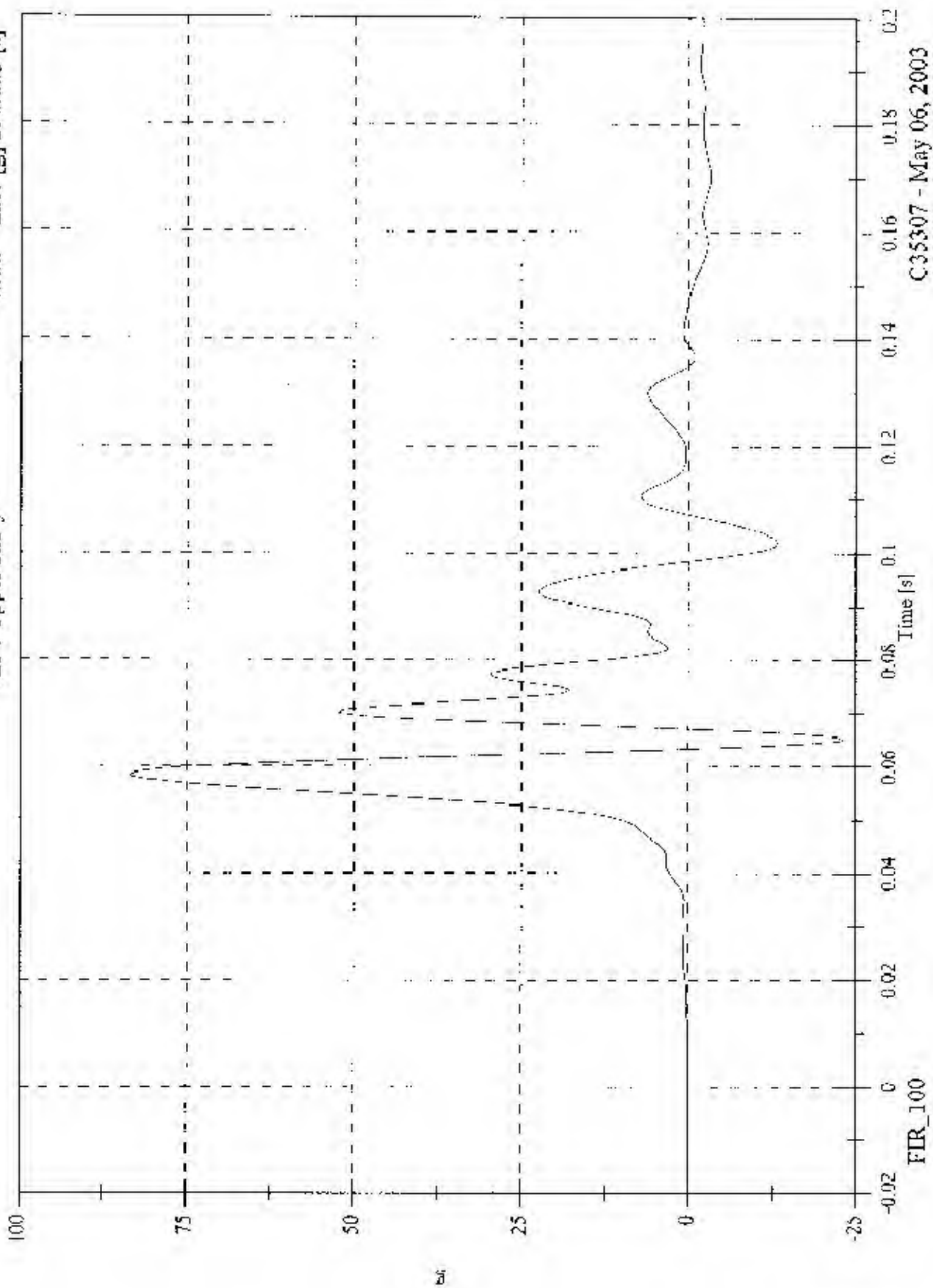
V2P1 Pelvic y



2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Rib y

Max: 83.3 [g] at 0.058 [s]
Min: -23.1 [g] at 0.065 [s]

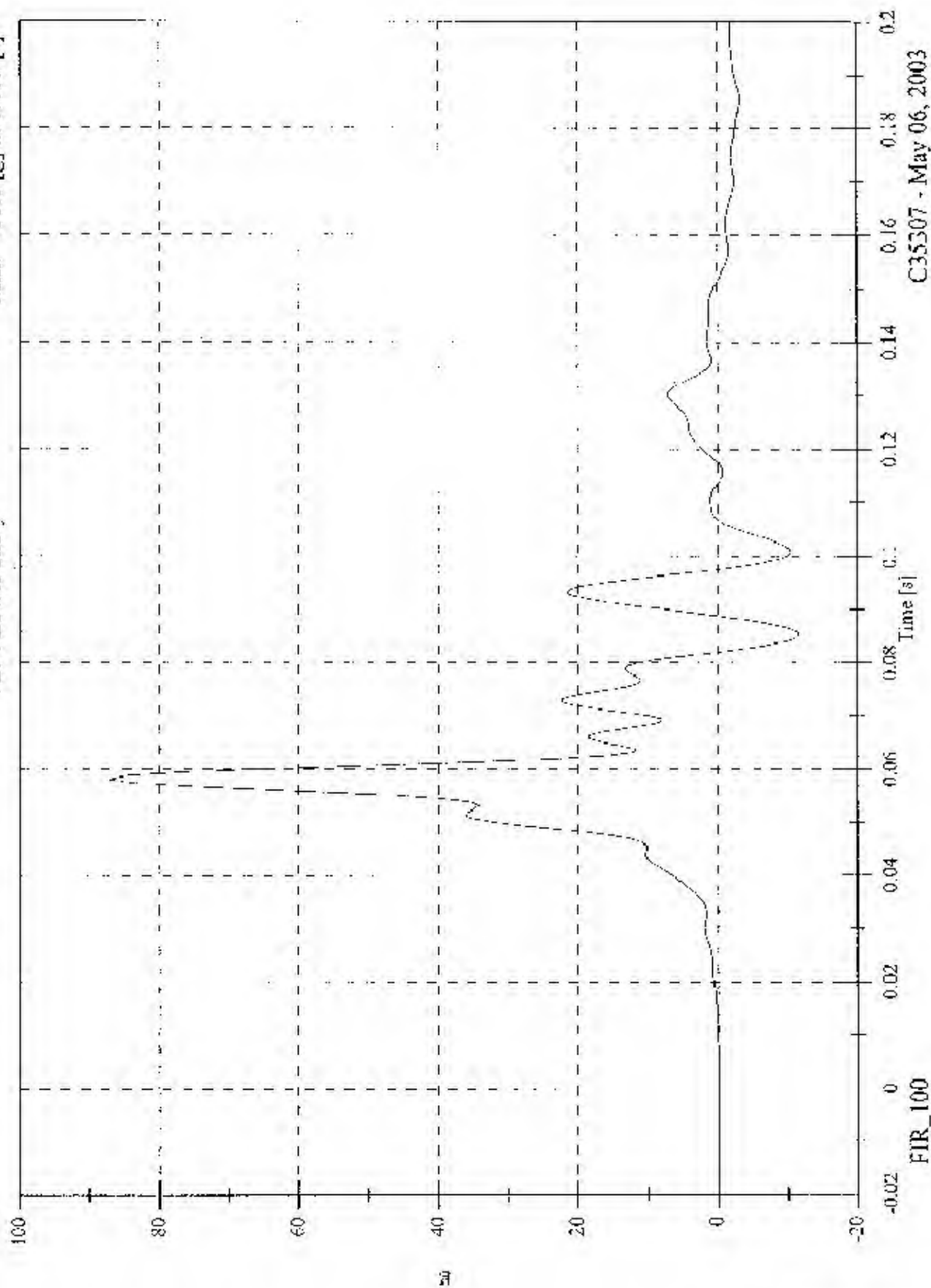


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 87.0 [g] at 0.058 [s]
Min: -11.6 [g] at 0.085 [s]

V2P4 Lower Rib y

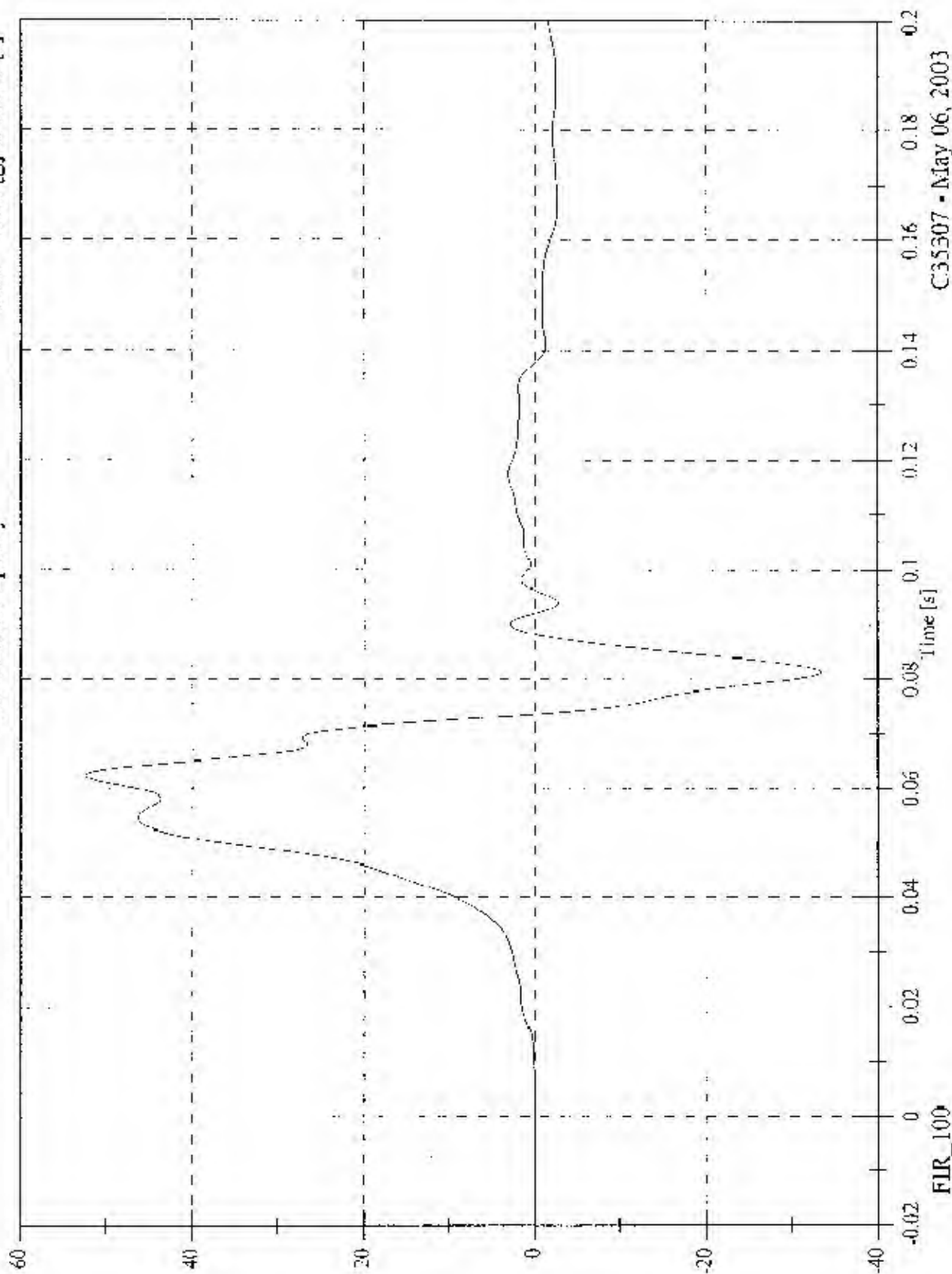


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2003 FNVSS 214D Test 8 2003 Honda Element

V2P4 Lower Spine y

Max: 52.6 [g] at 0.062 [s]
Min: -33.5 [g] at 0.081 [s]

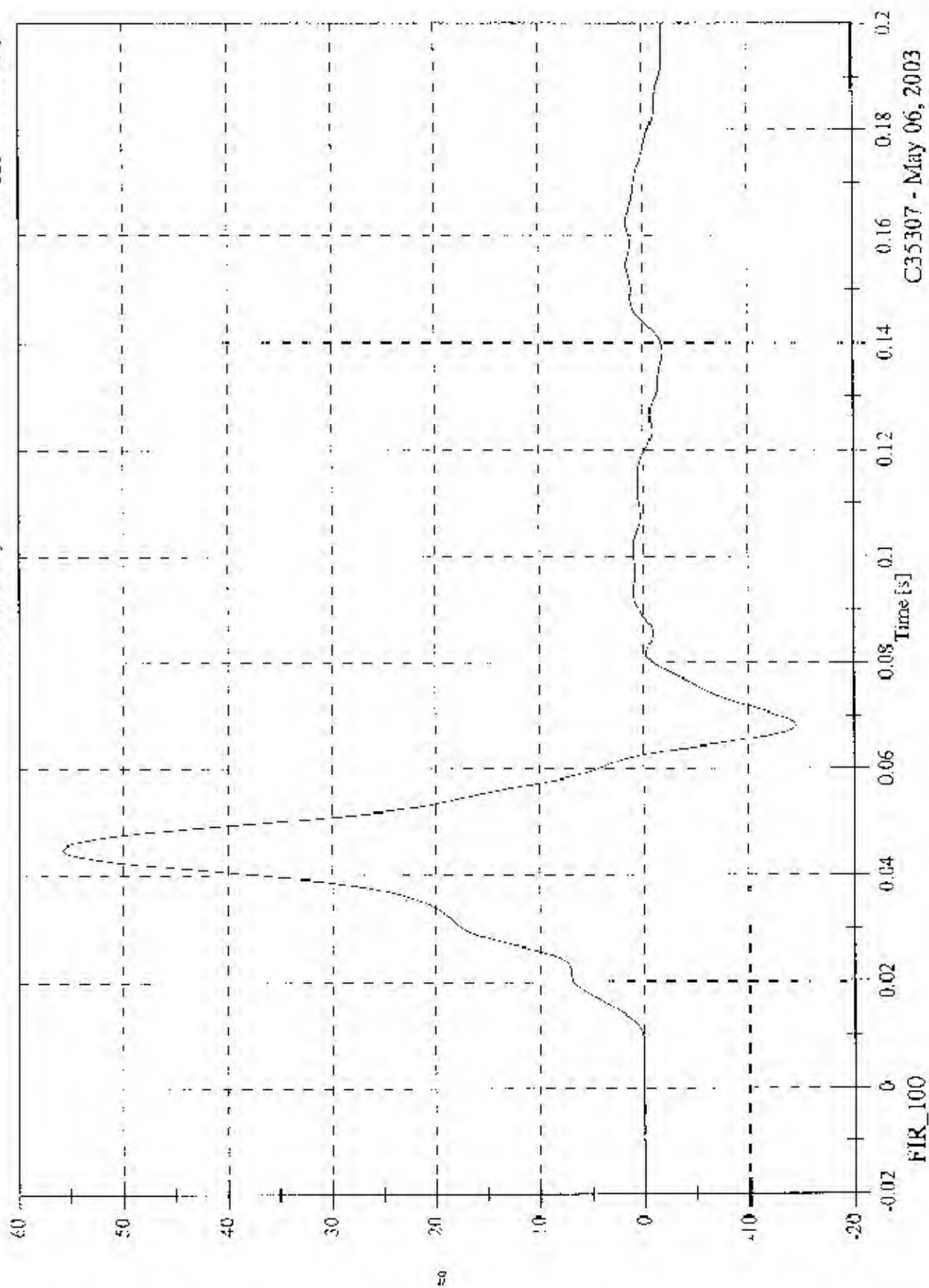


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 55.8 [g] at 0.045 [s]
Min: -14.5 [g] at 0.068 [s]

V2P4 Pelvic y

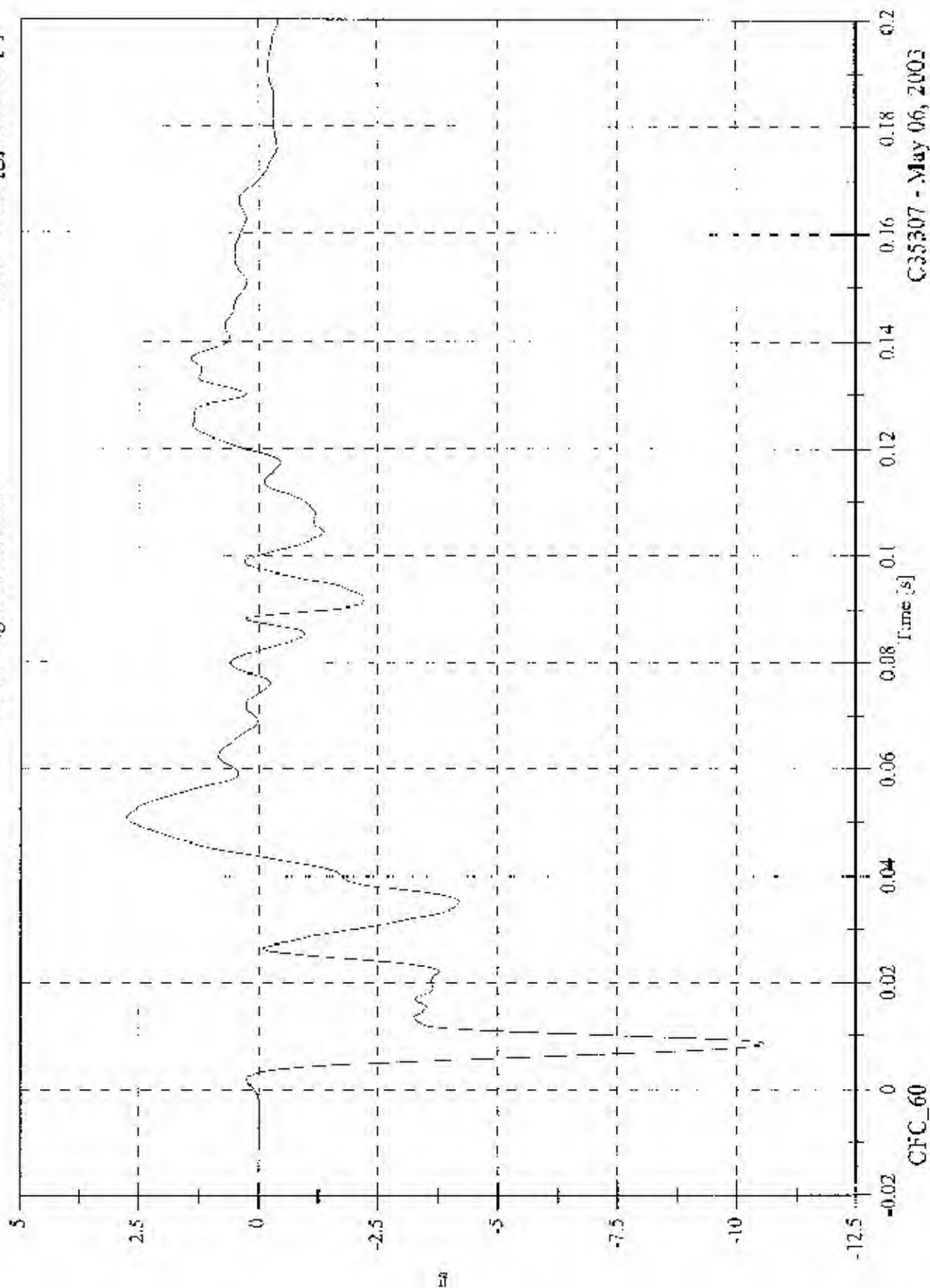


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill x

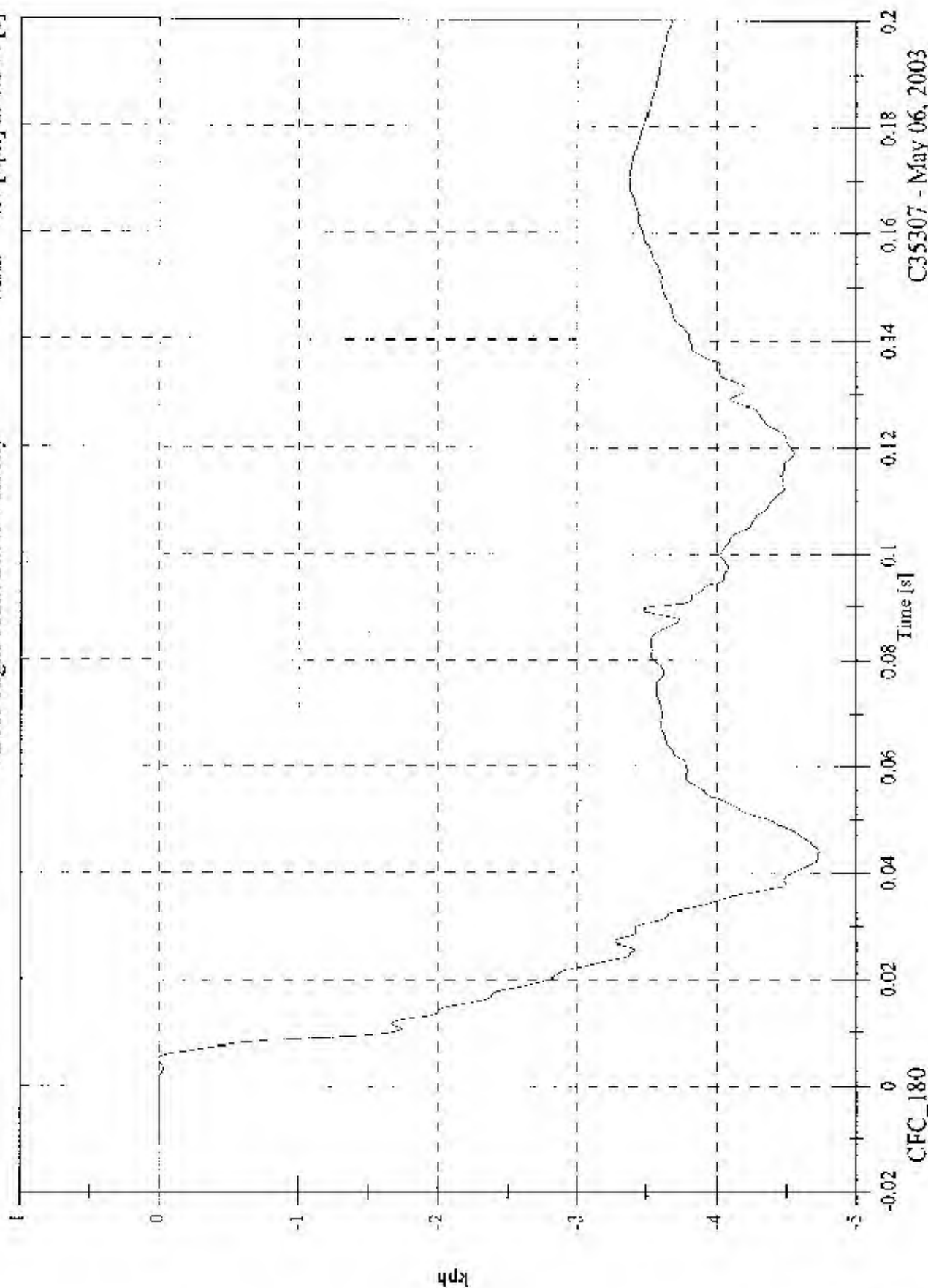
Max: 2.8 [g] at 0.051 [s]
Min: -10.6 [g] at 0.008 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill x Velocity

Max: 0.0 [kph] at 0.005 [s]
Min: -4.7 [kph] at 0.044 [s]

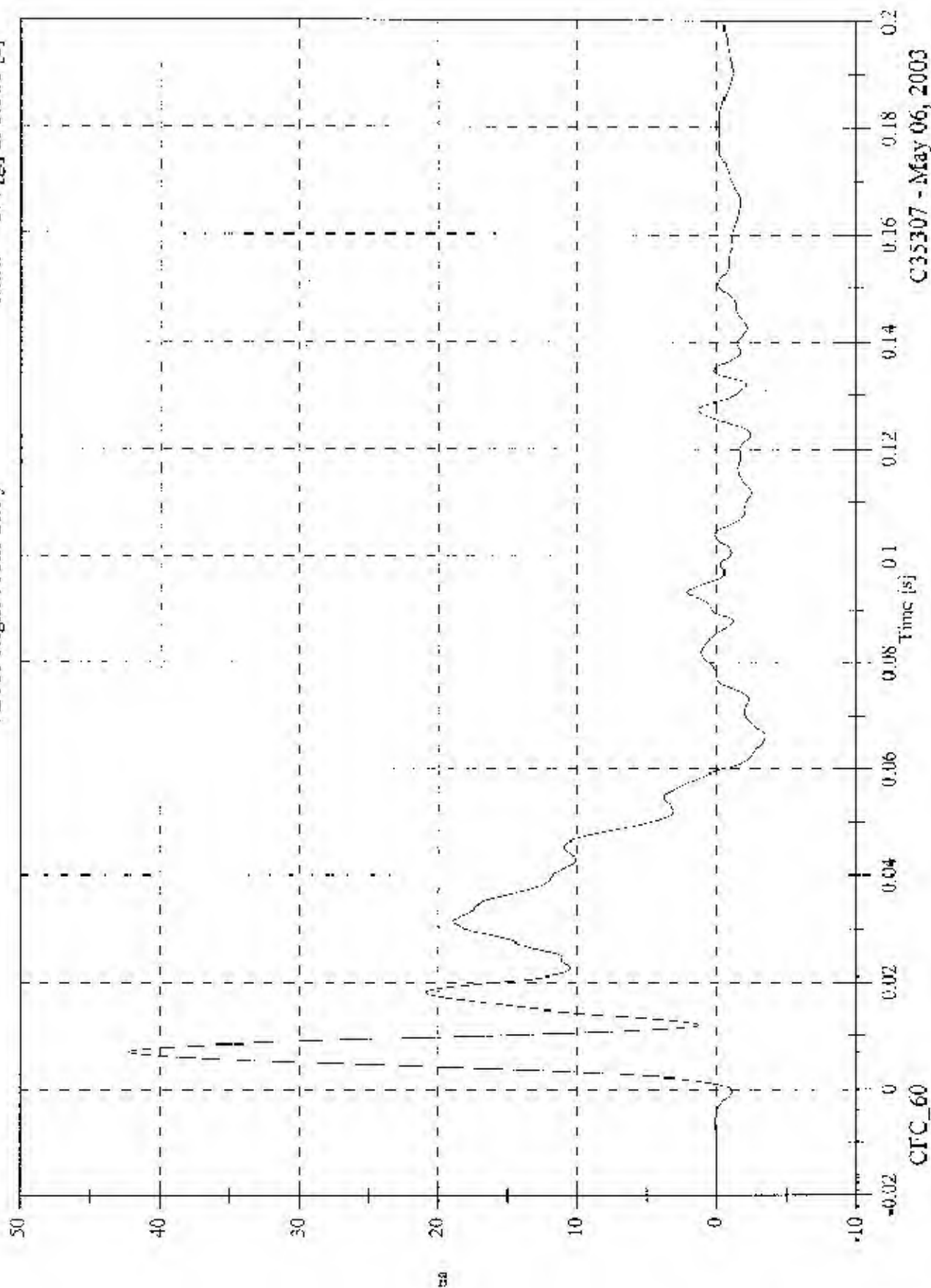


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Silt y

Max: 42.2 [g] at 0.007 [s]
Min: -3.4 [g] at 0.066 [s]

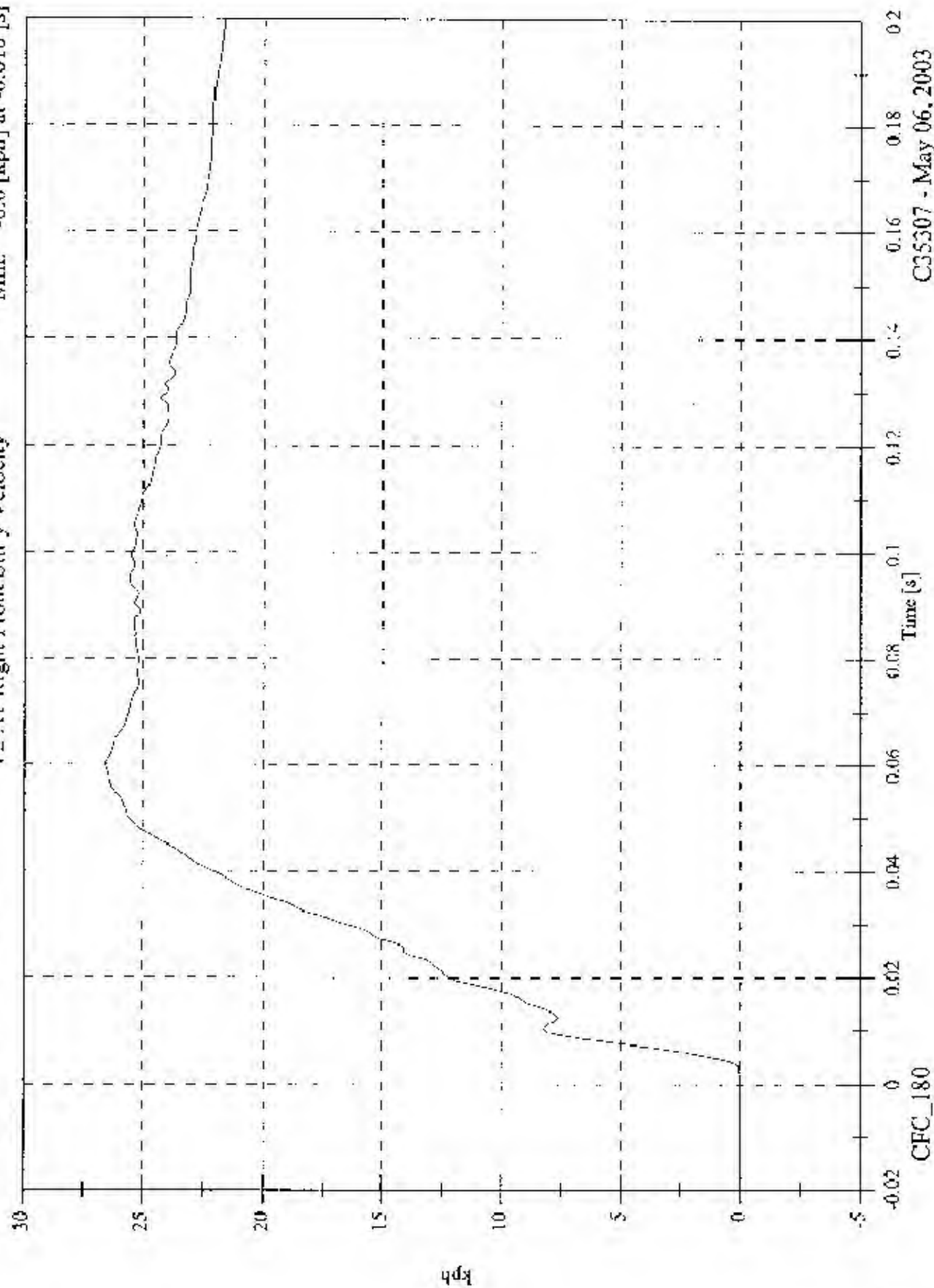


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill y Velocity

Max: 26.6 [kph] at 0.060 [s]
Min: -0.0 [kph] at -0.016 [s]

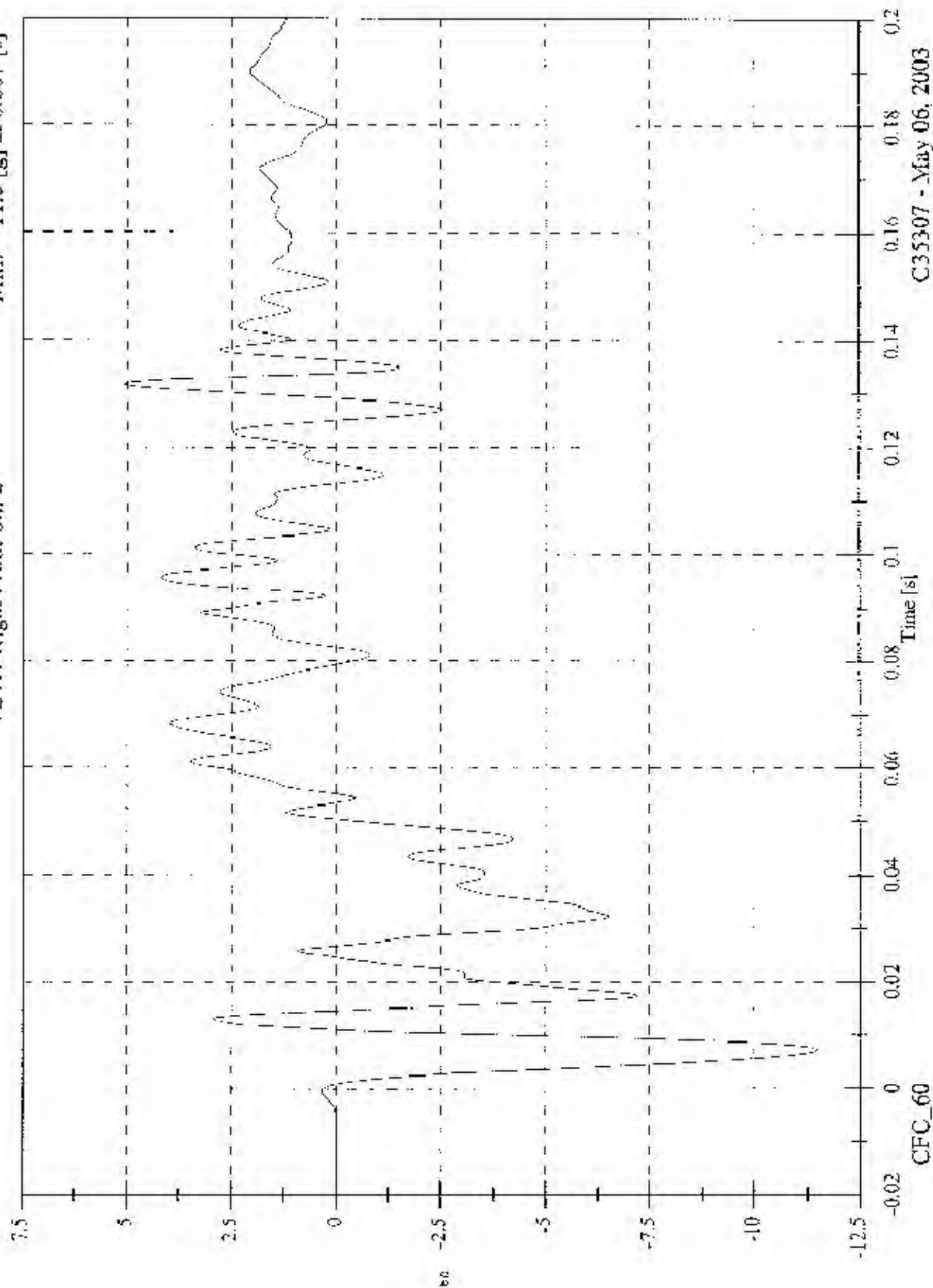


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill z

Max: 5.1 [g] at 0.132 [s]
 Min: -11.5 [g] at 0.007 [s]

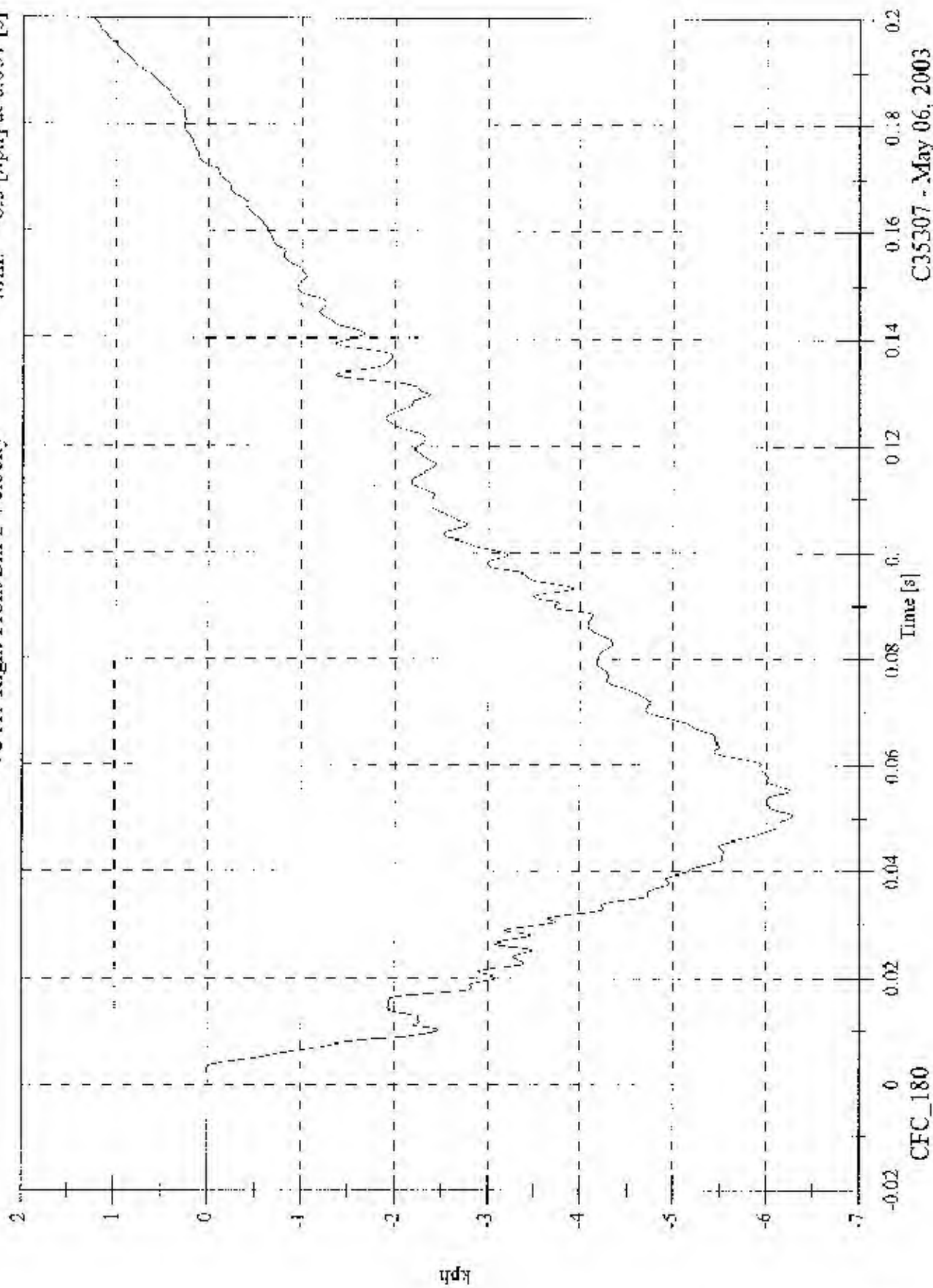


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2003 FNVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill z Velocity

Max: 1.3 [kph] at 0.200 [s]
Min: -6.3 [kph] at 0.051 [s]

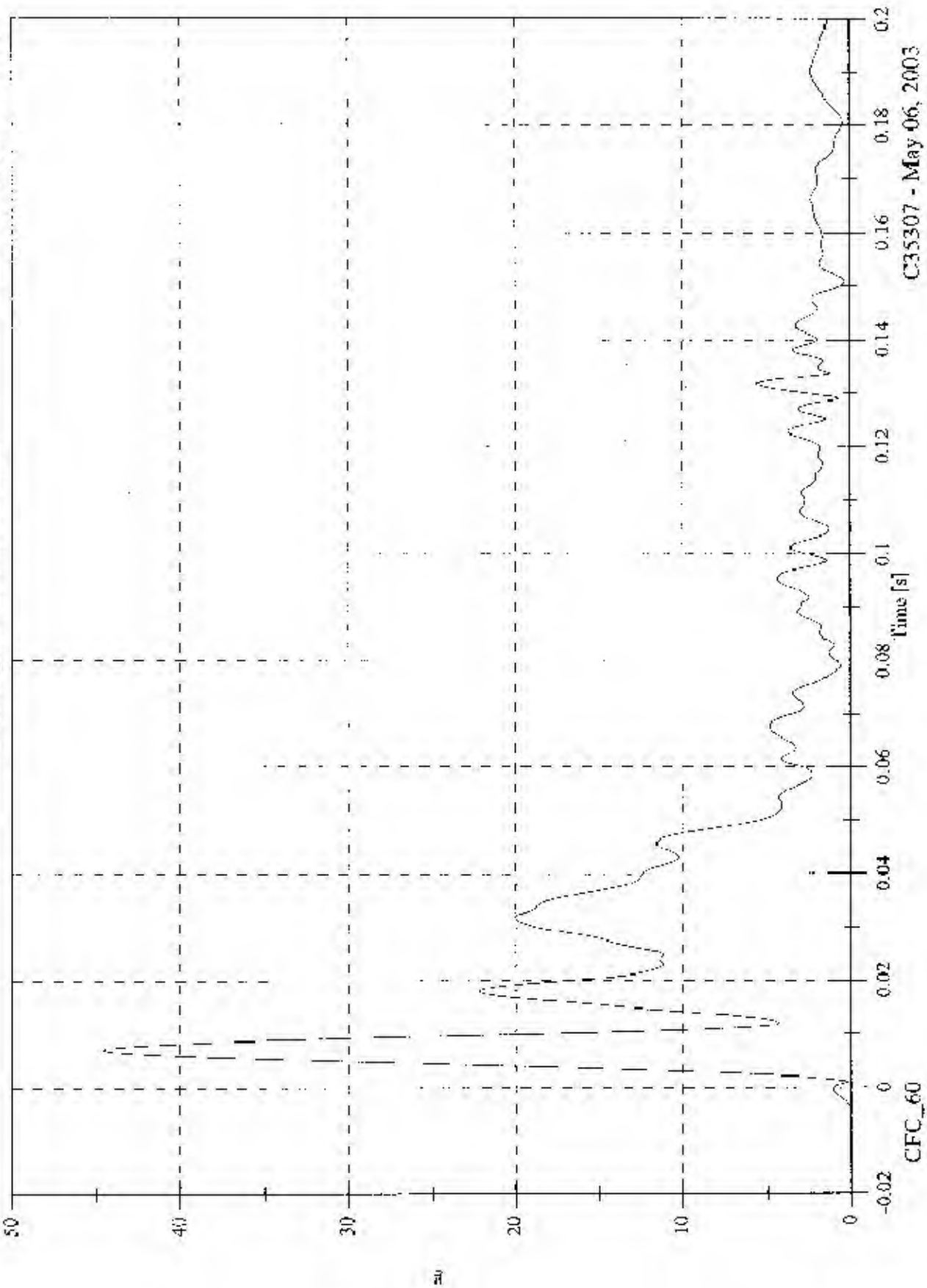


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 AI Right Front Sill Resultant

Max: 44.6 [g] at 0.007 [s]
Min: 0.0 [g] at -0.017 [s]



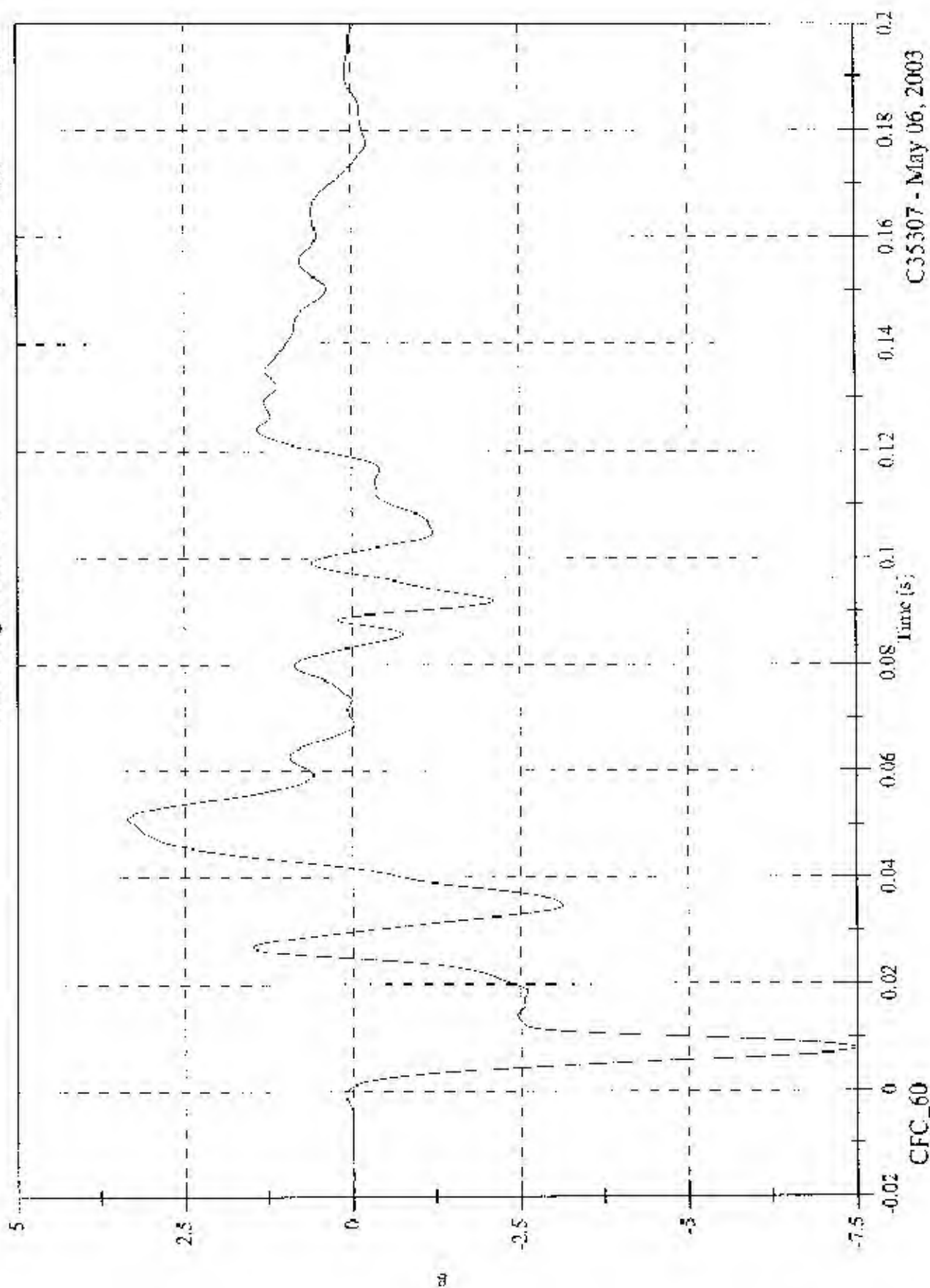
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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Still x

Max: 3.3 [g] at 0.051 [s]

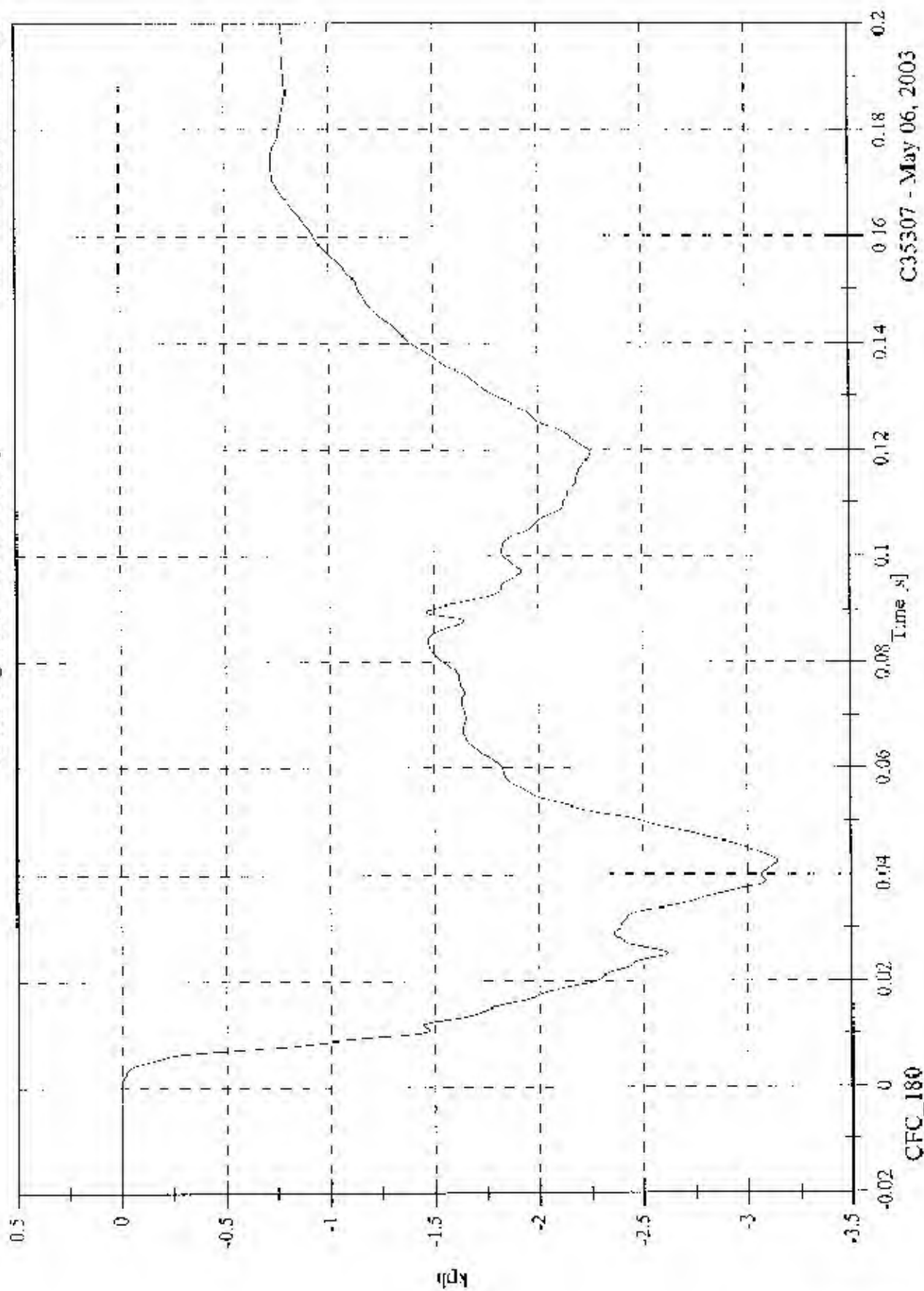
Min: -7.5 [g] at 0.008 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill x Velocity

Max: 0.0 [kph] at 0.000 [s]
Min: -3.1 [kph] at 0.042 [s]

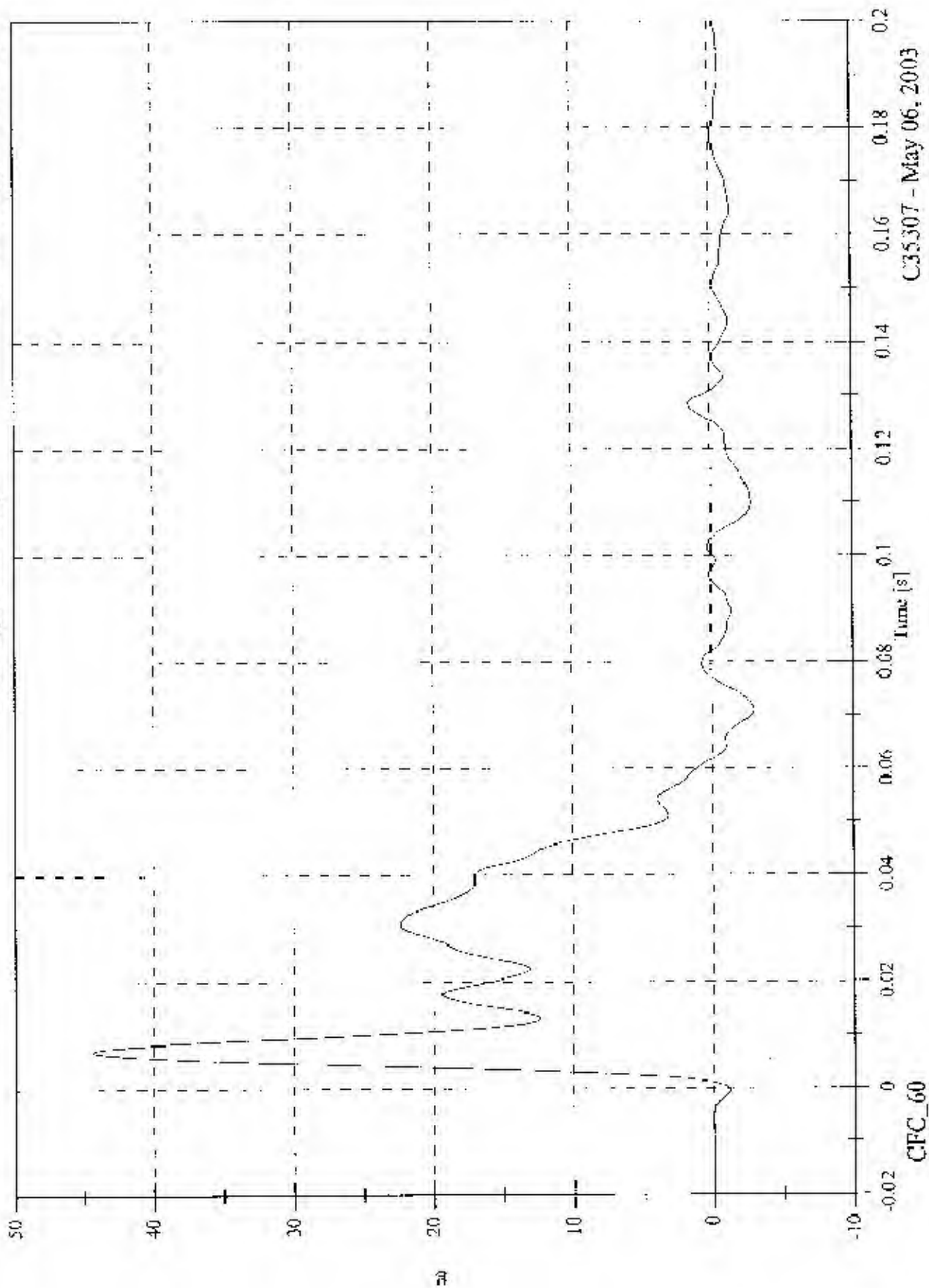


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill y

Max: 44.4 [g] at 0.007 [s]
Min: -3.0 [g] at 0.071 [s]

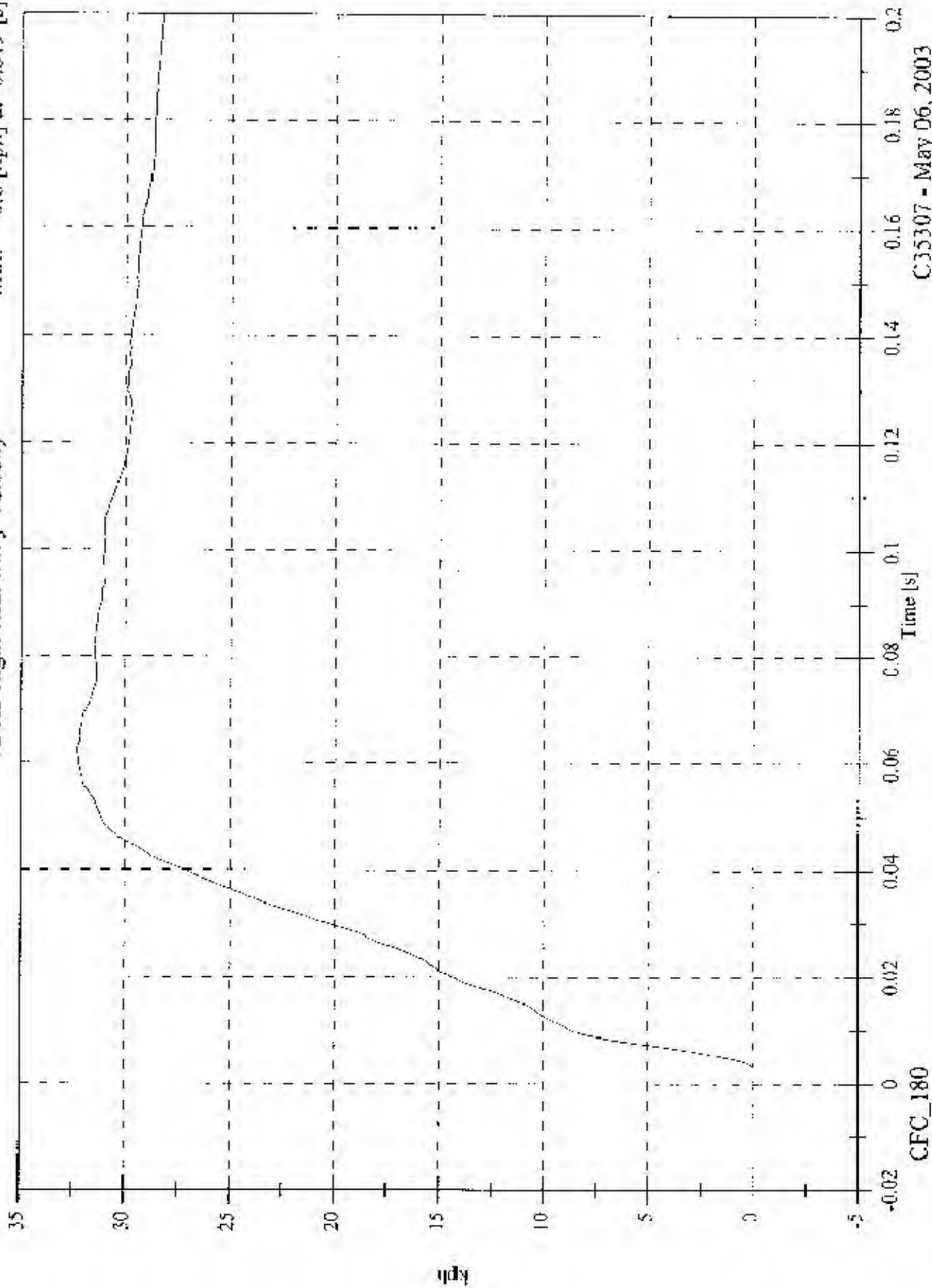


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill y Velocity

Max: 32.3 [kph] at 0.062 [s]
Min: -0.0 [kph] at -0.019 [s]

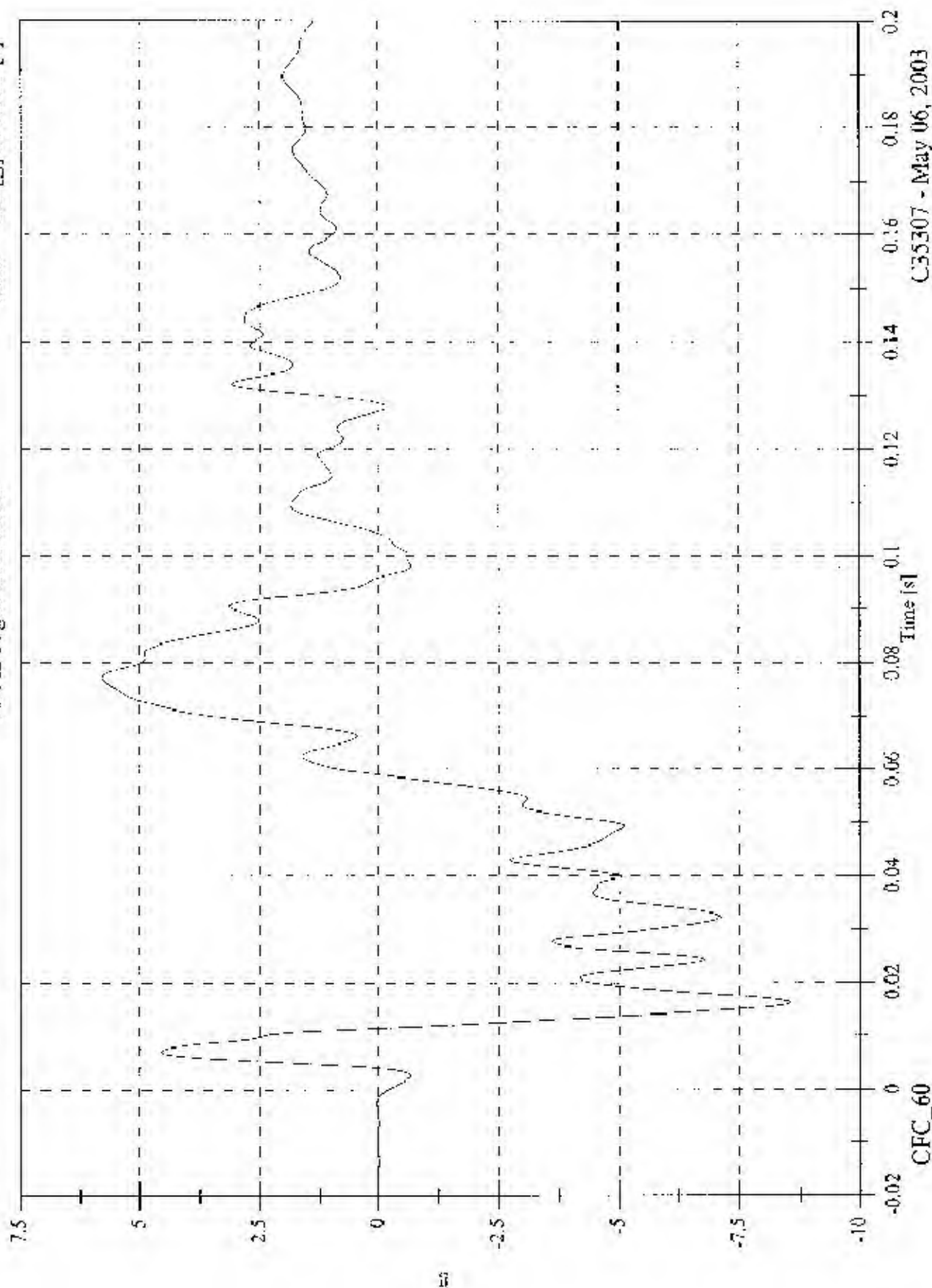


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2003 FNV/SS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill z

Max: 5.8 [g] at 0.077 [s]
Min: -8.5 [g] at 0.016 [s]

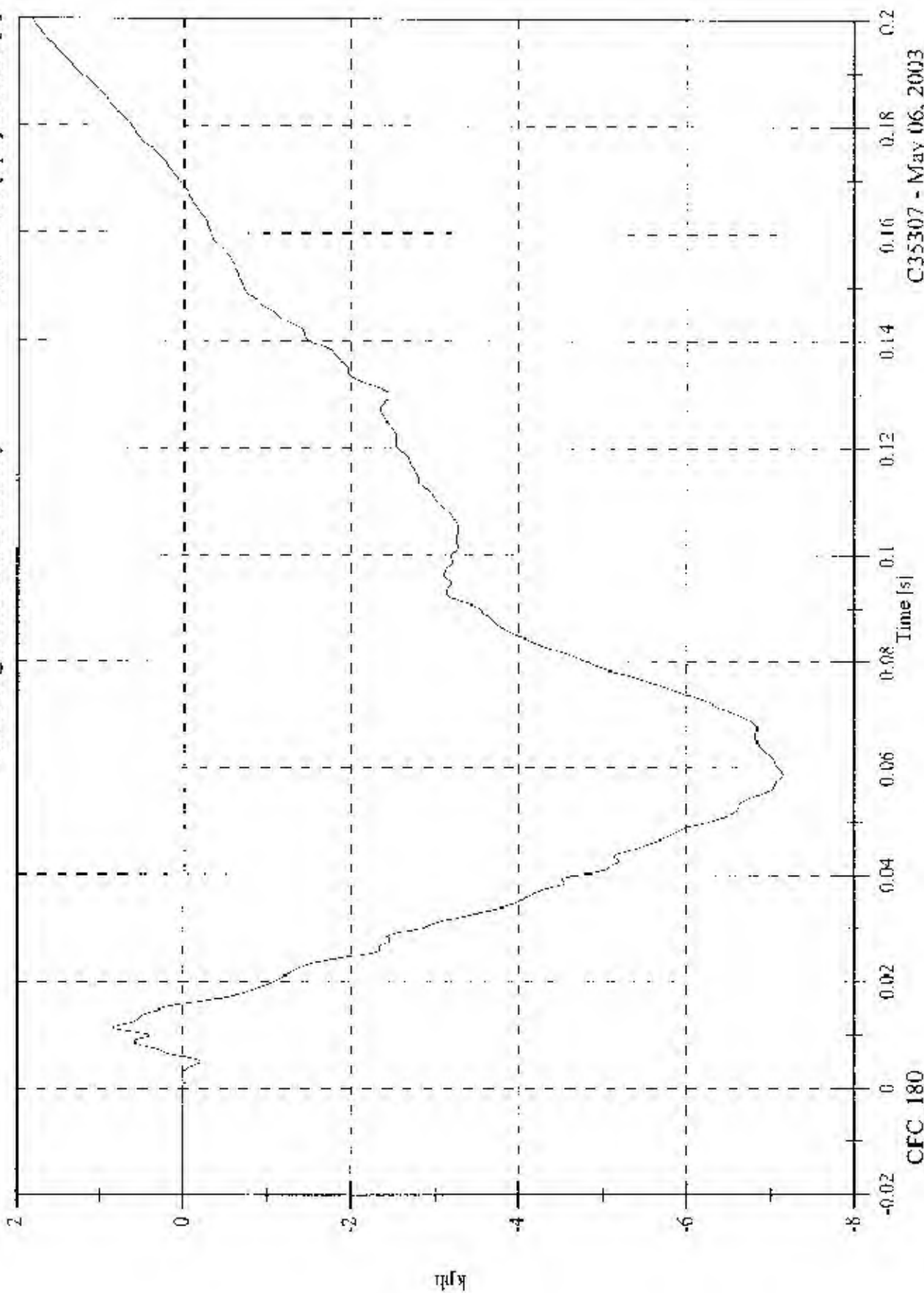


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill z Velocity

Max: 1.8 [kph] at 0.200 [s]
Min: -7.1 [kph] at 0.059 [s]

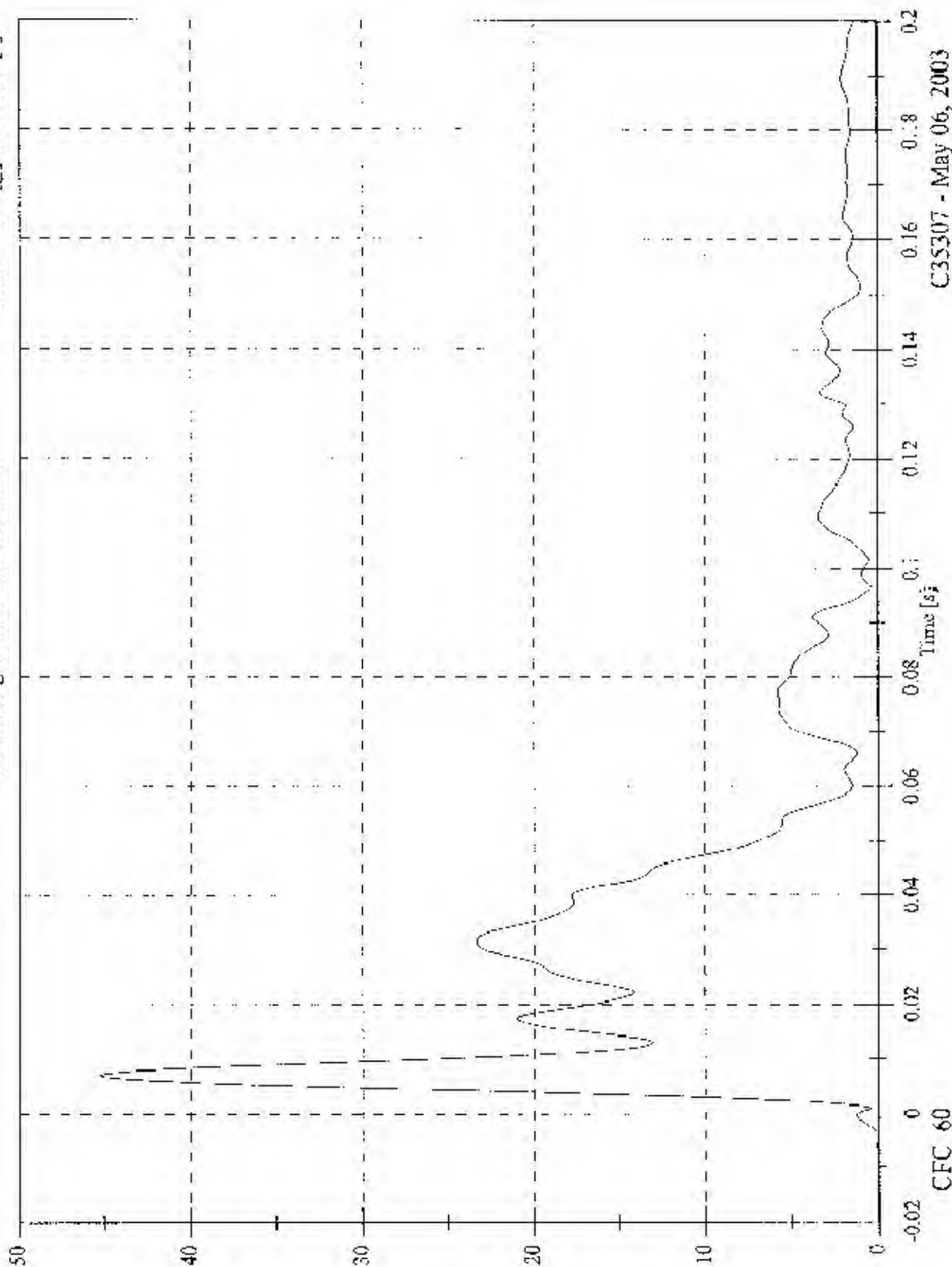


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill Resultant

Max: 45.2 [g] at 0.007 [s]
Min: 0.0 [g] at -0.020 [s]

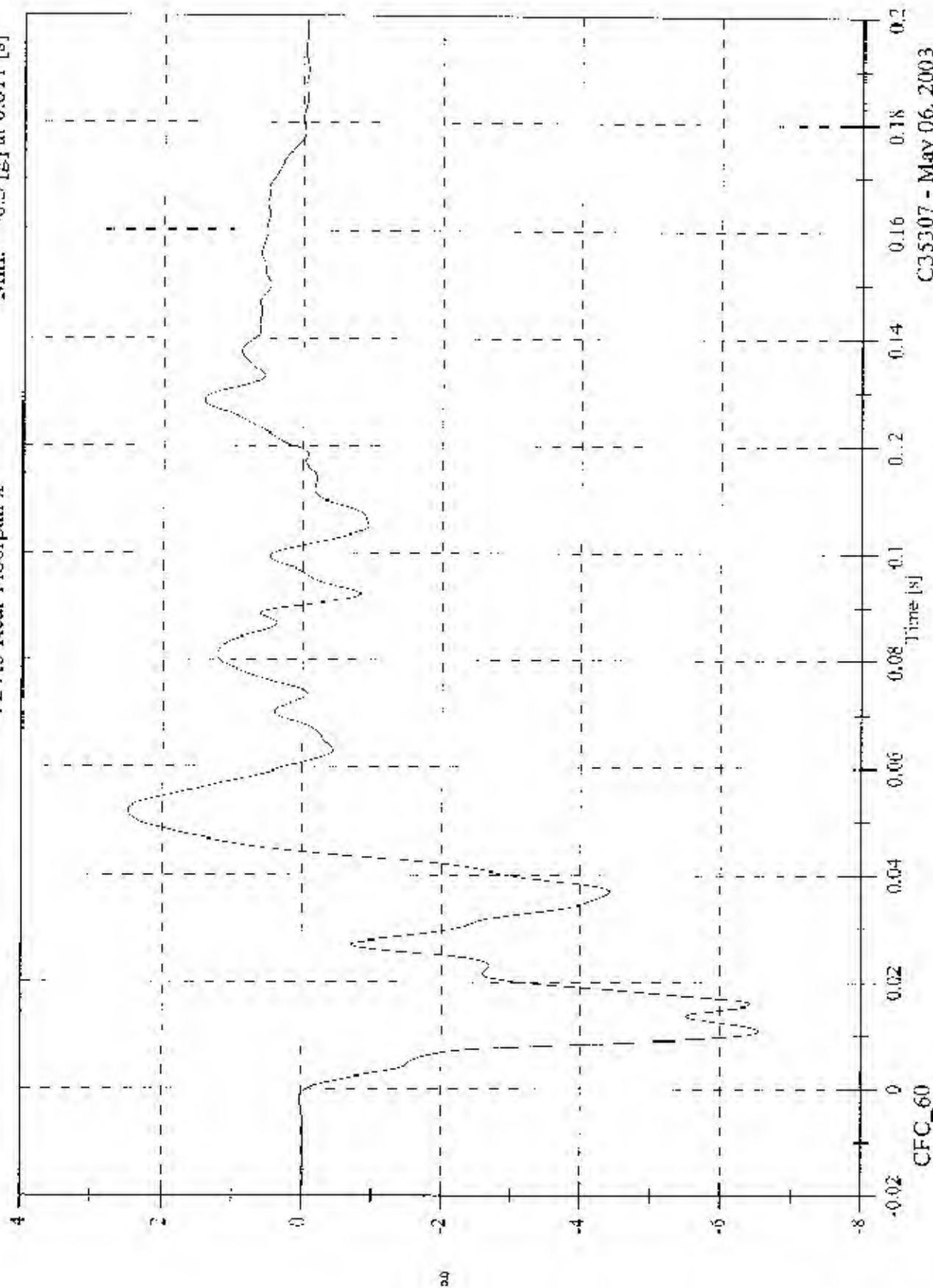


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan x

Max: 2.5 [g] at 0.052 [s]
Min: -6.5 [g] at 0.011 [s]

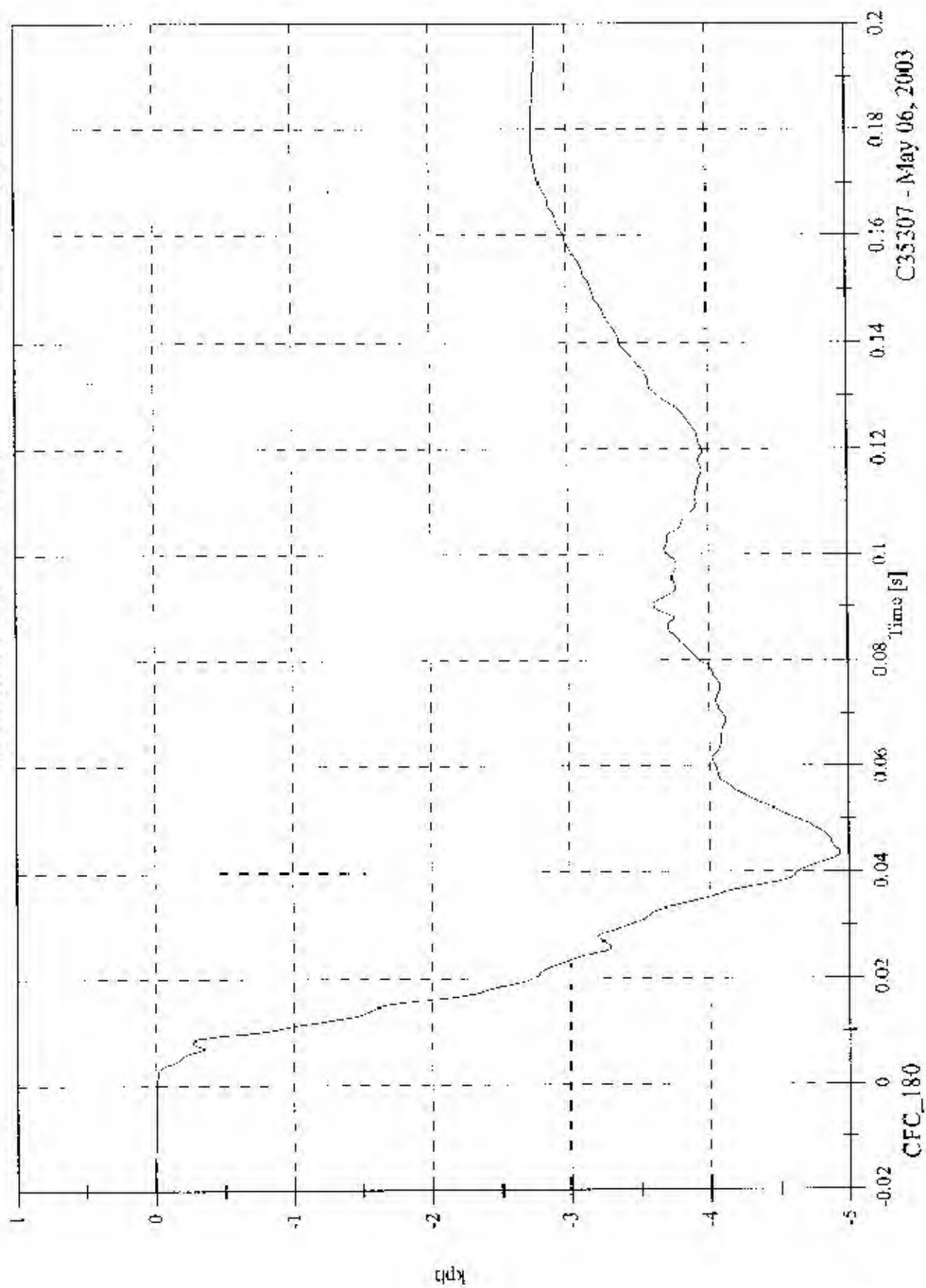


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan x Velocity

Max: 0.0 [kph] at -0.020 [s]
Min: -4.9 [kph] at 0.043 [s]



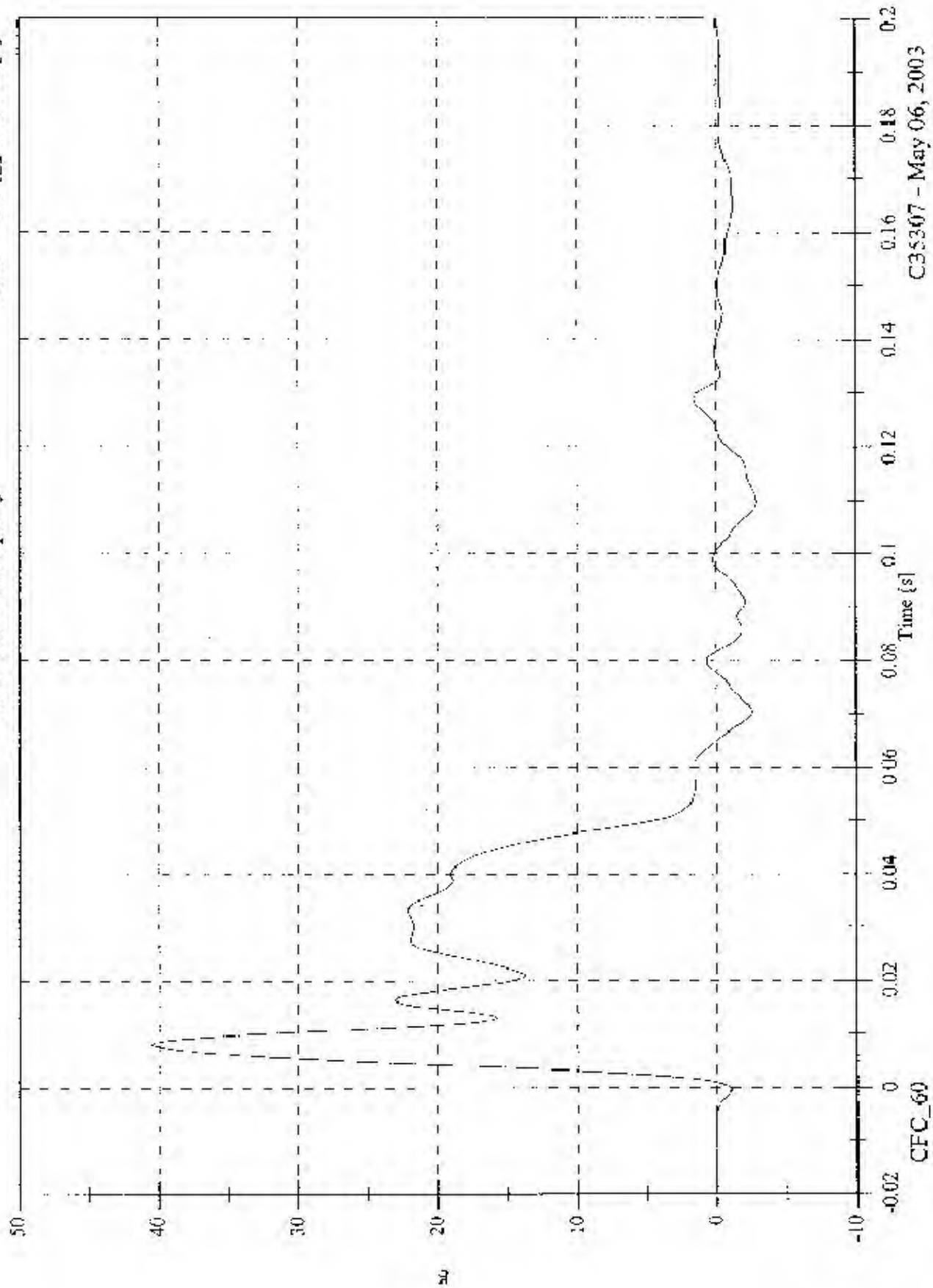
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan y

Max: 40.5 [g] at 0.008 [s]

Min: -2.8 [g] at 0.110 [s]

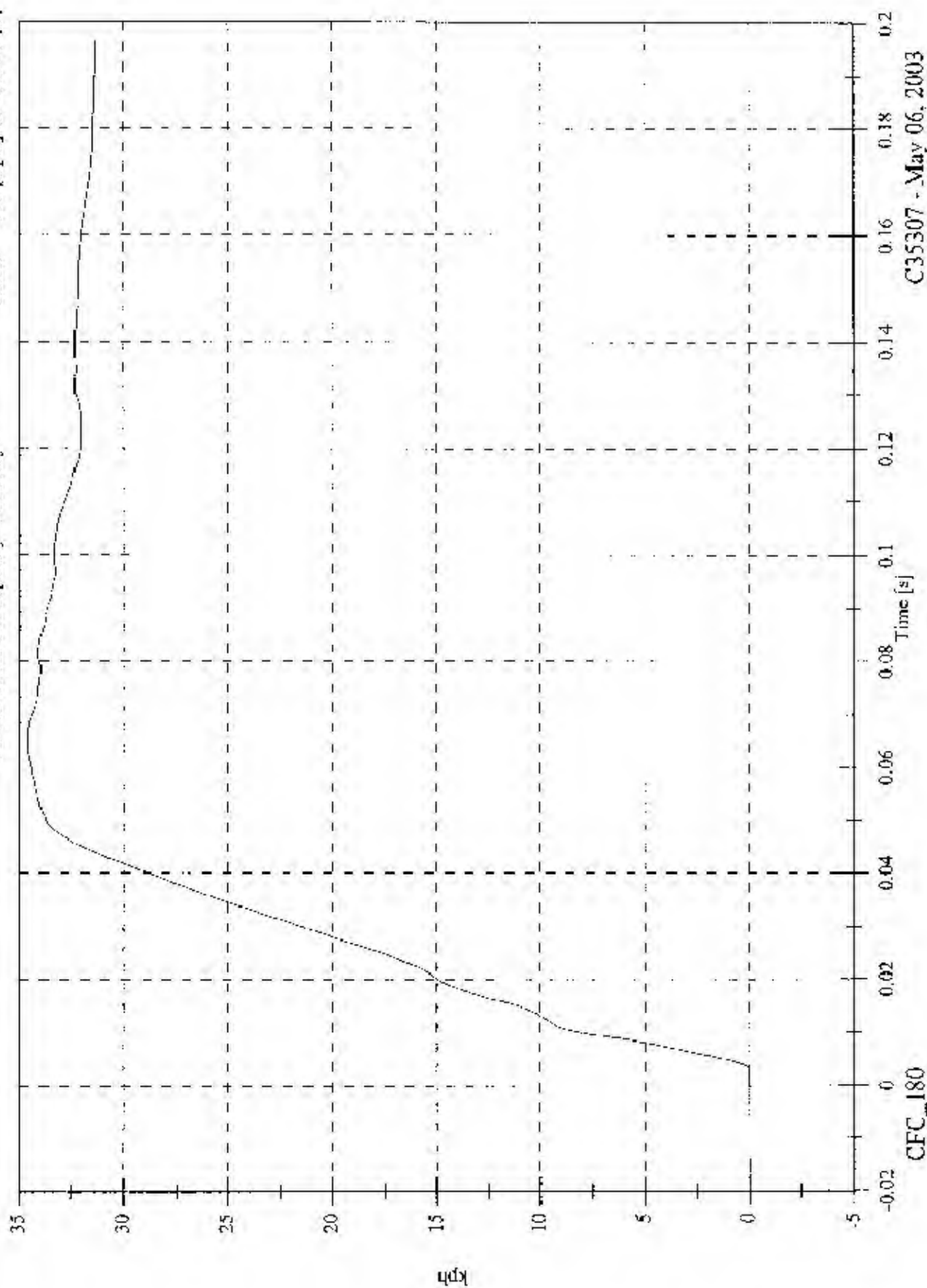


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan y Velocity

Max: 34.6 [kph] at 0.064 [s]
Min: -0.0 [kph] at -0.020 [s]

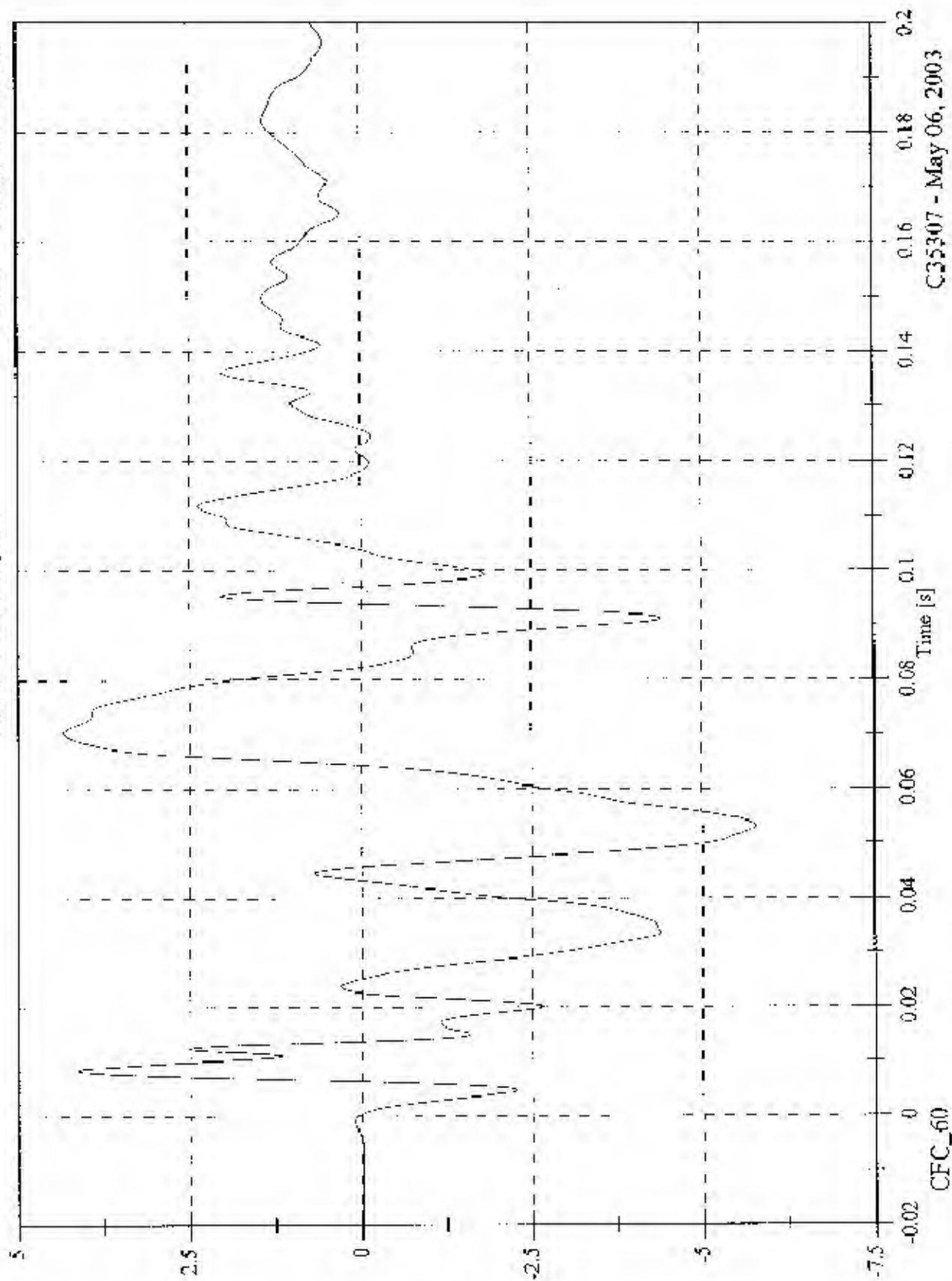


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan z

Max: 4.3 [g] at 0.070 [s]
Min: -5.8 [g] at 0.053 [s]

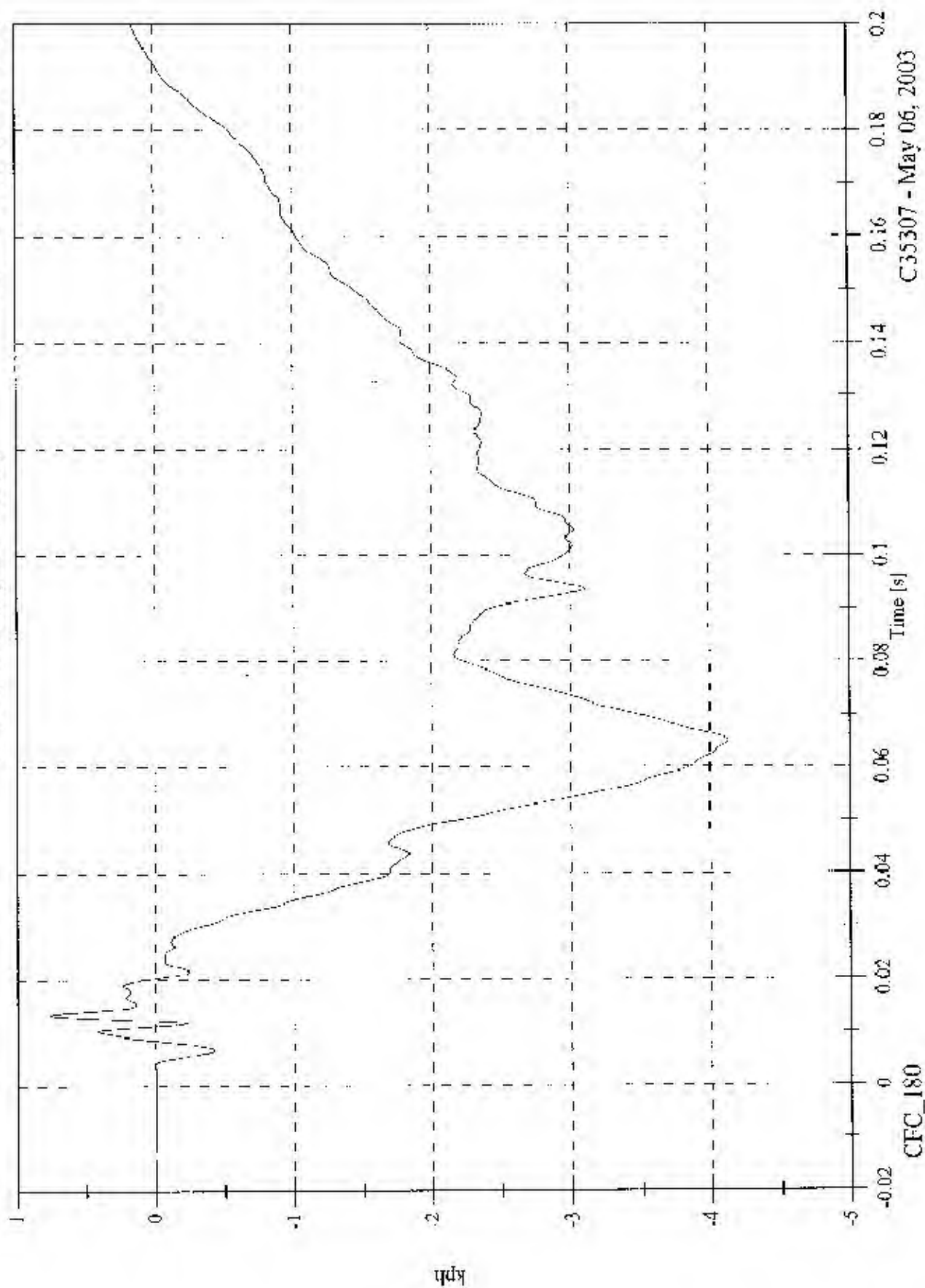


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan z Velocity

Max: 0.8 [kph] at 0.013 [s]
Min: -4.1 [kph] at 0.065 [s]

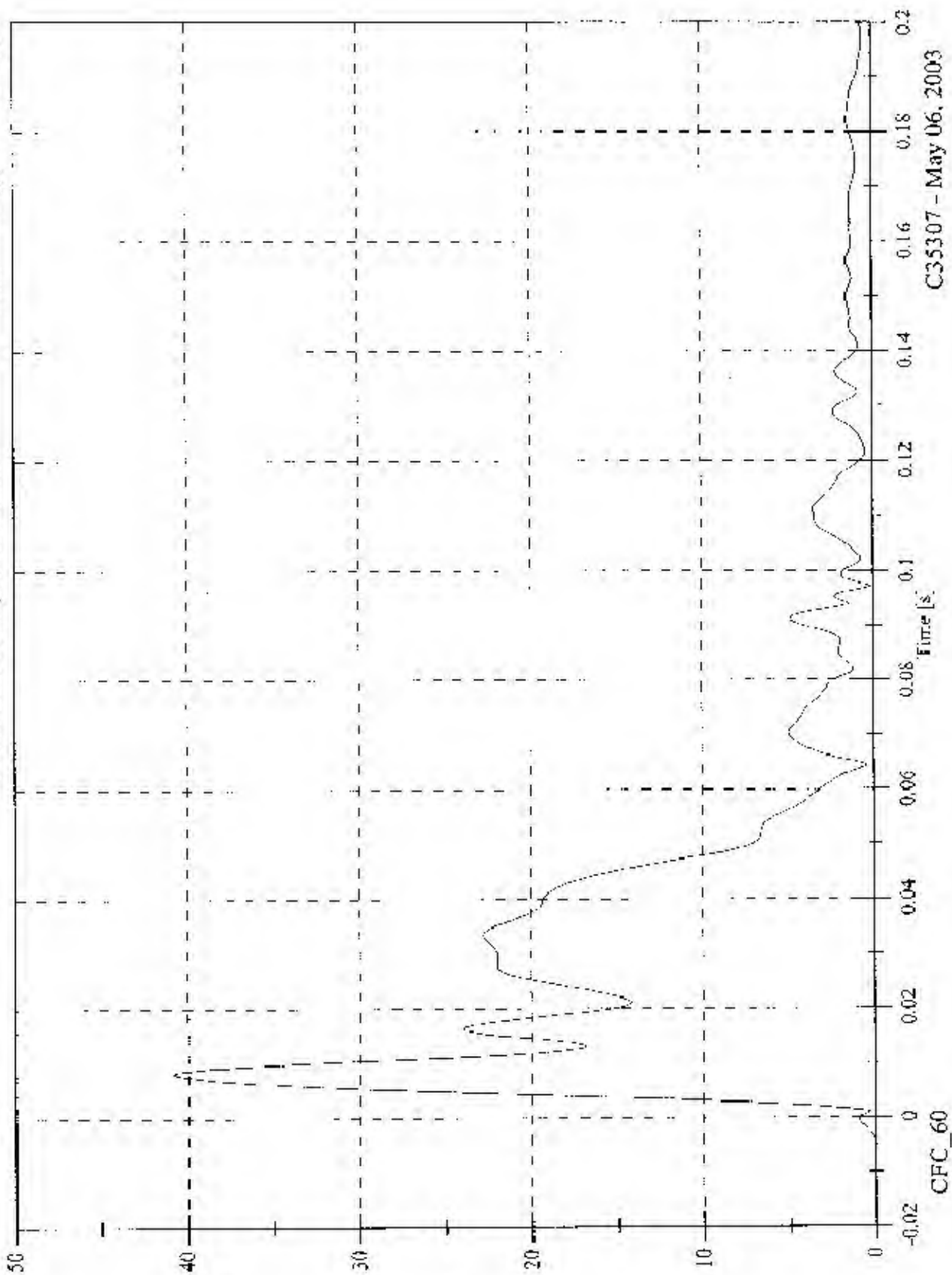


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan Resultant

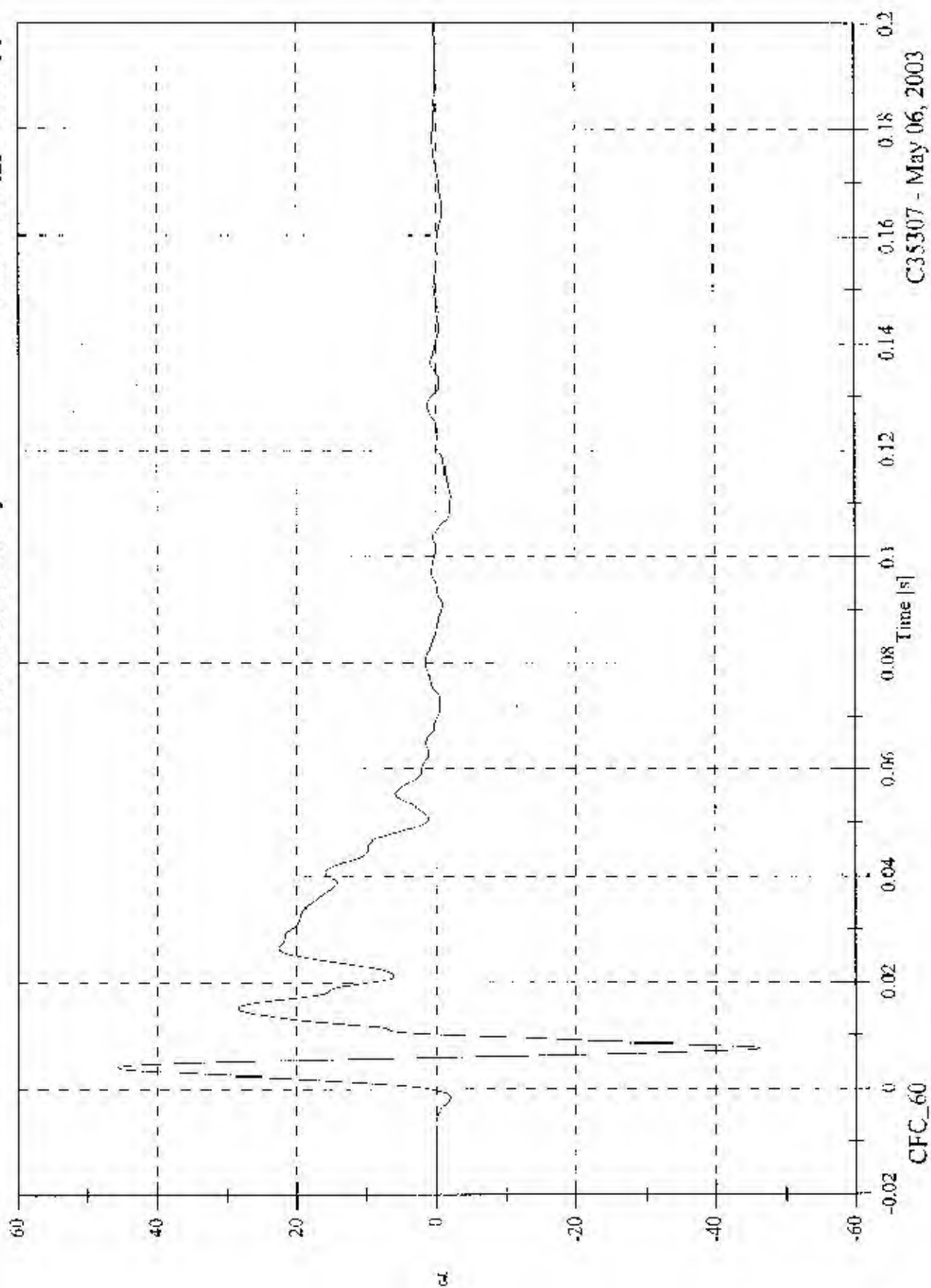
Max: 40.8 [g] at 0.008 [s]
Min: 0.0 [g] at -0.020 [s]



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V2 A4 Left Rear Sill y

Max: 45.8 [g] at 0.004 [s]
Min: -46.3 [g] at 0.008 [s]



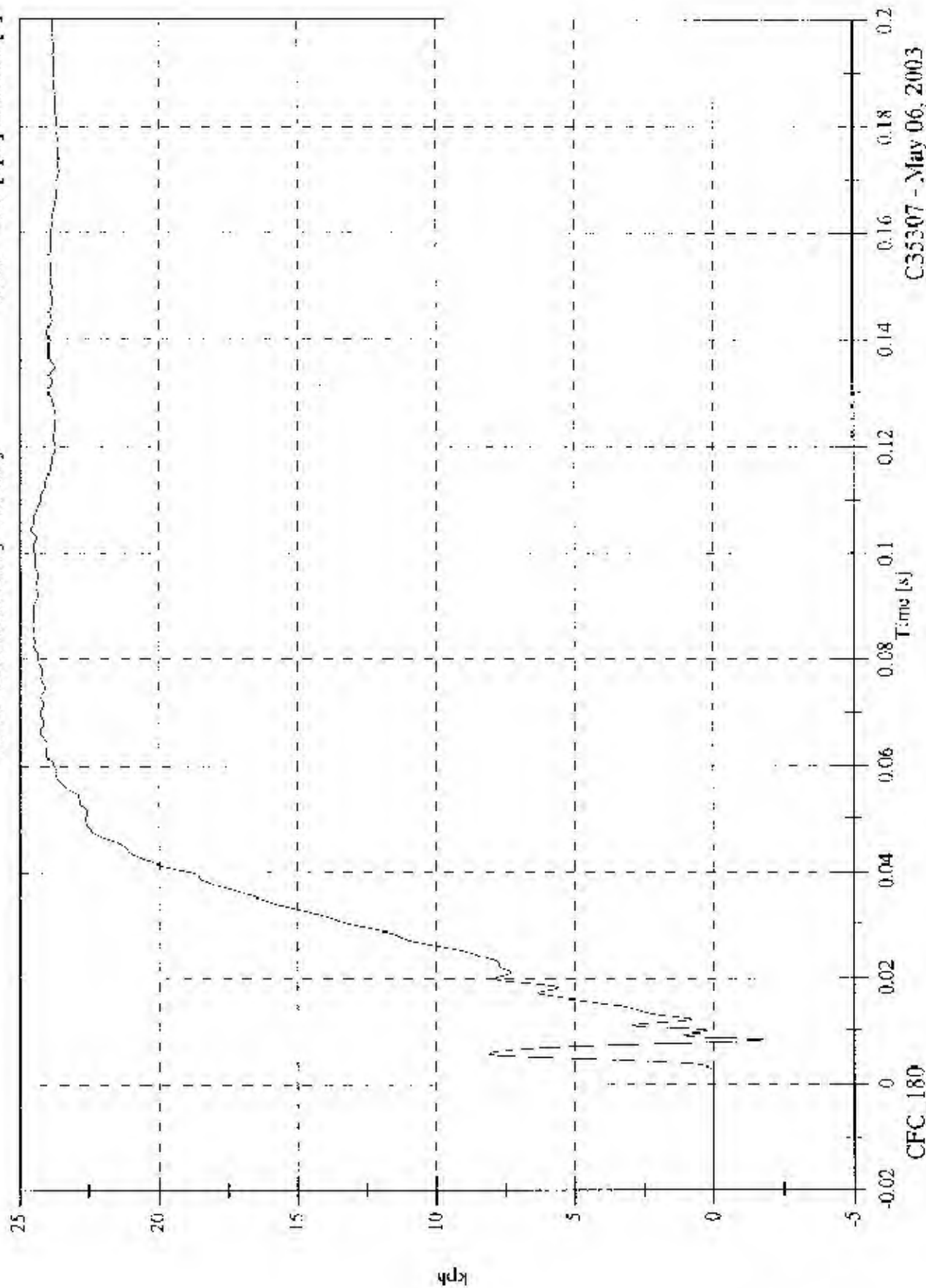
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Max: 24.6 [kph] at 0.104 [s]

Min: -1.8 [kph] at 0.008 [s]

V2 A4 Left Rear Sillary Velocity

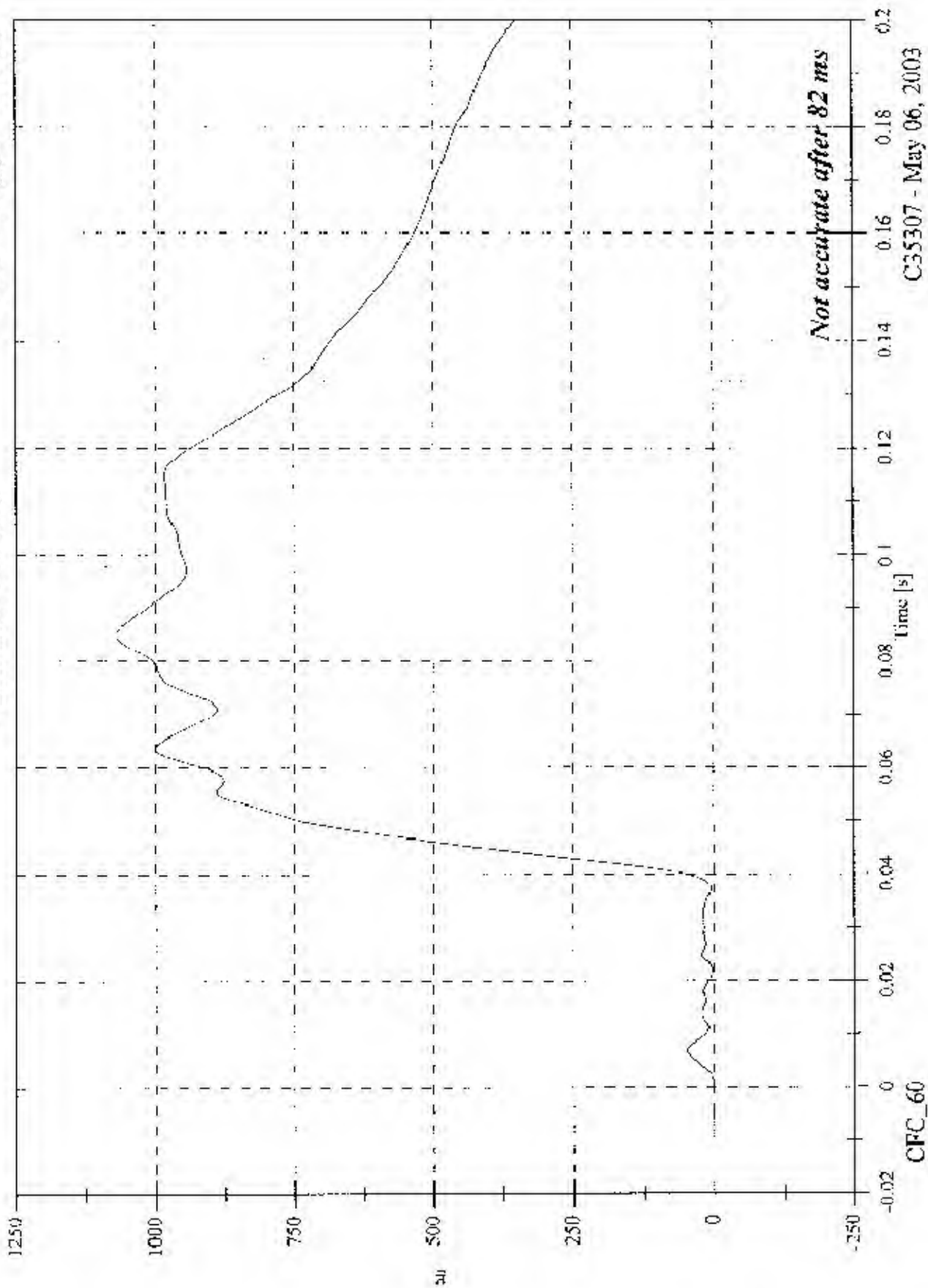


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V2 A5 Left Front Sill y

Max: 1069.9 [g] at 0.085 [s]
Min: -1.0 [g] at -0.001 [s]

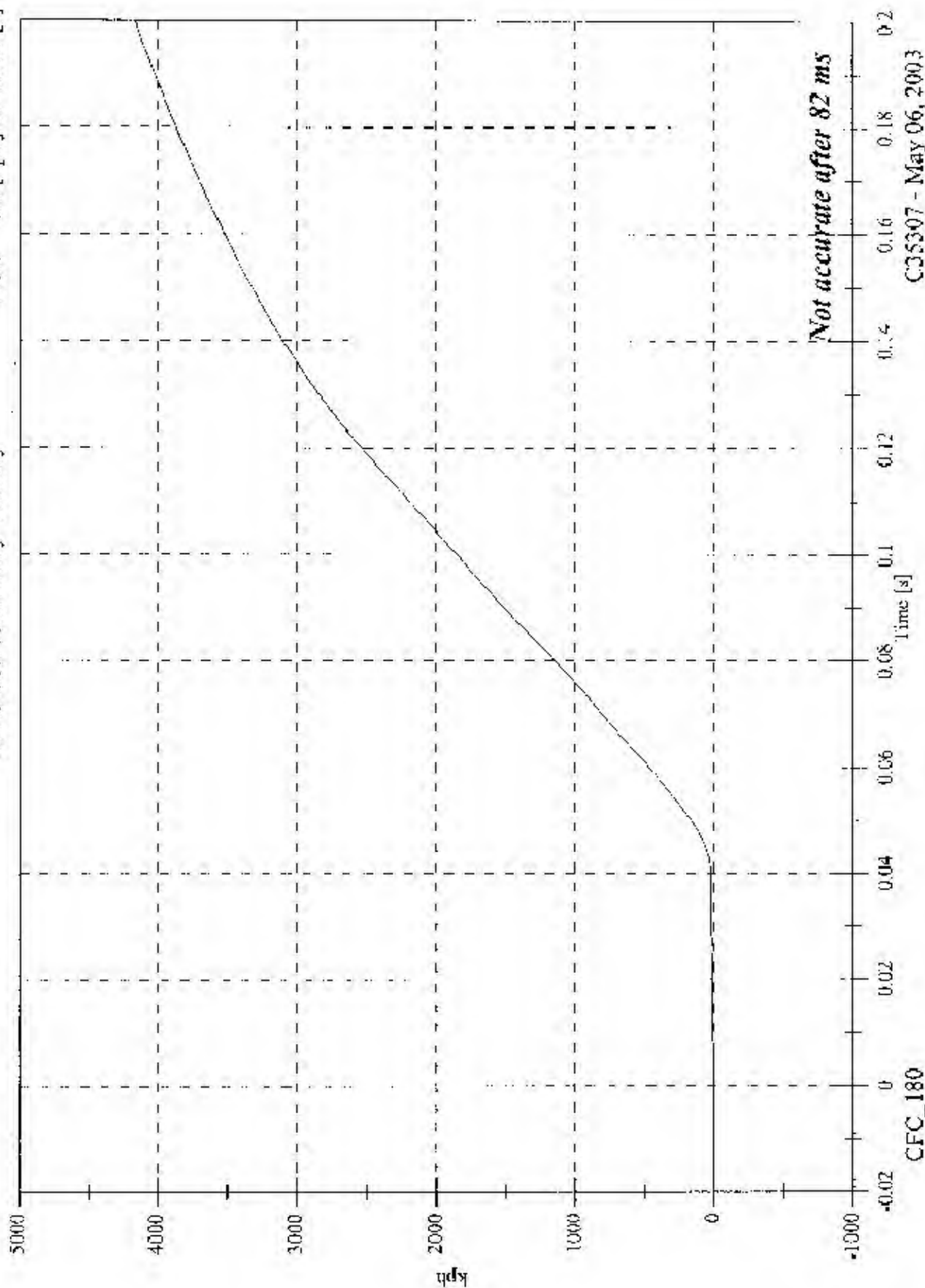


2003 FMVSS 214D Test 8 2003 Honda Element

V2 A5 Left Front Sill y Velocity

Max: 4157.2 [kph] at 0.200 [s]

Min: -0.0 [kph] at -0.007 [s]



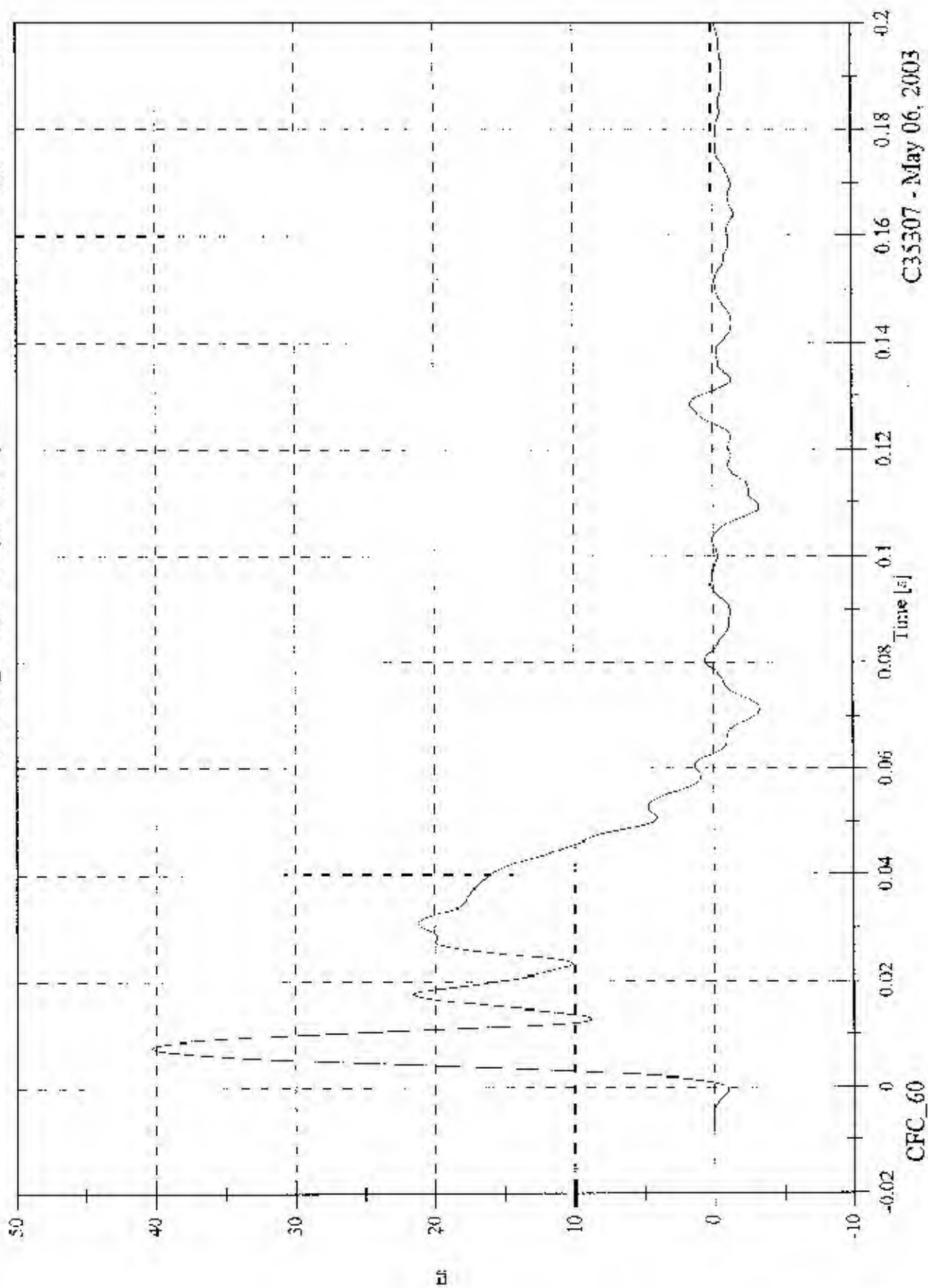
Not accurate after 82 ms

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V2 A7 Right Rear Compartment y

Max: 40.3 [g] at 0.008 [s]
Min: -3.3 [g] at 0.109 [s]

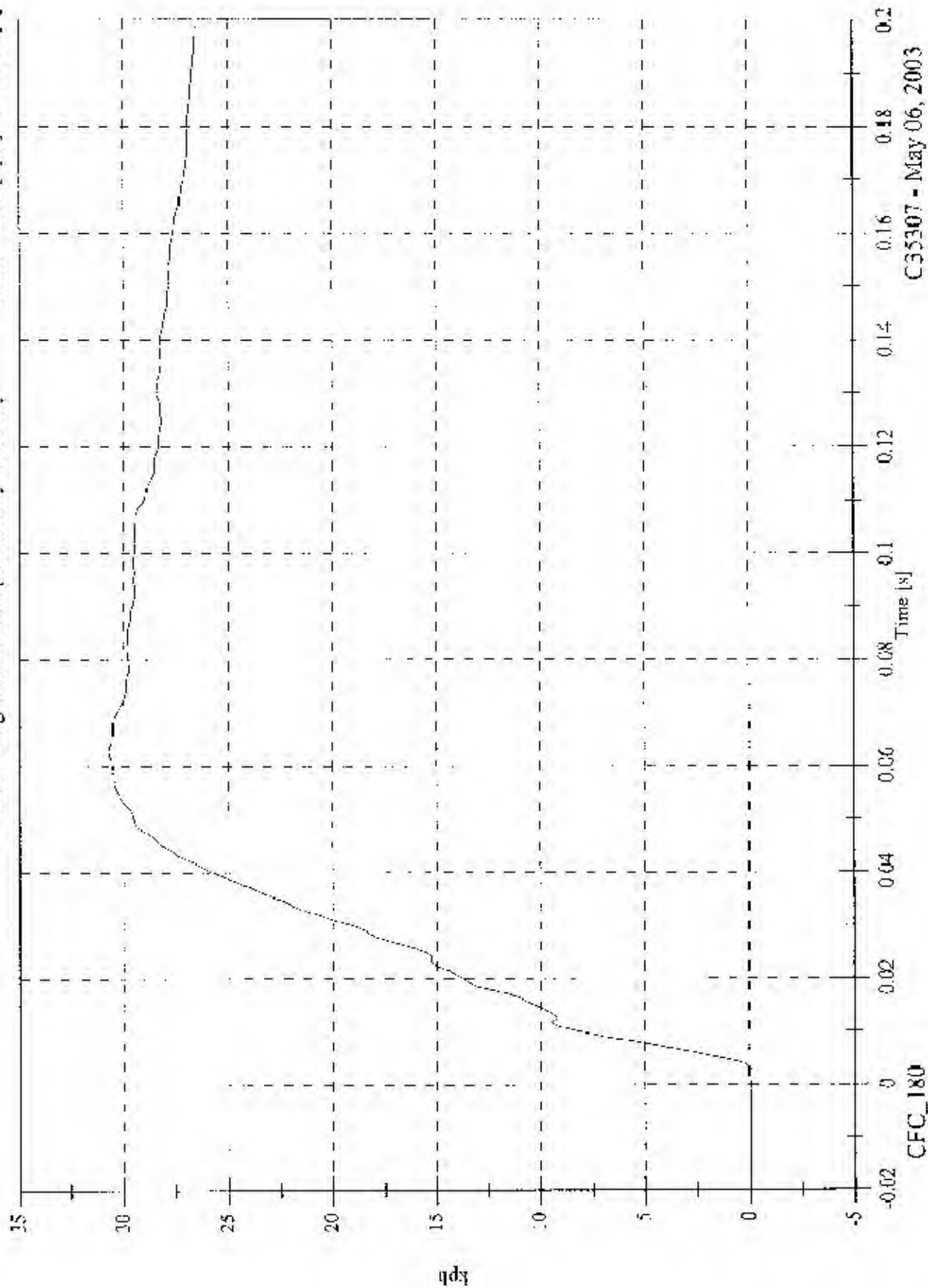


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V2 A7 Right Rear Compartment y Velocity

Max: 30.7 [kph] at 0.063 [s]
Min: -0.0 [kph] at -0.016 [s]

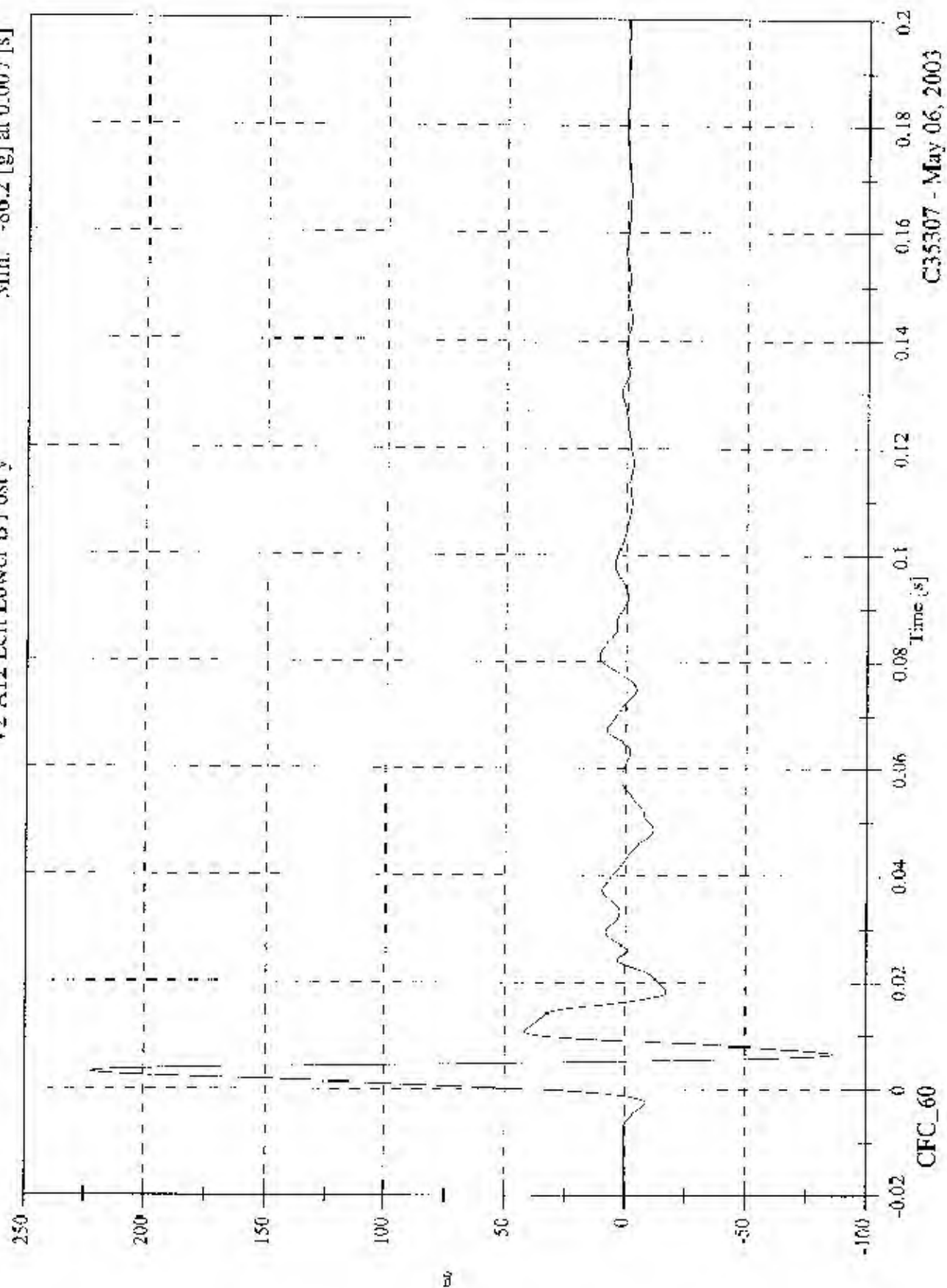


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V2 A12 Left Lower B Post y

Max: 222.3 [g] at 0.003 [s]
Min: -86.2 [g] at 0.007 [s]

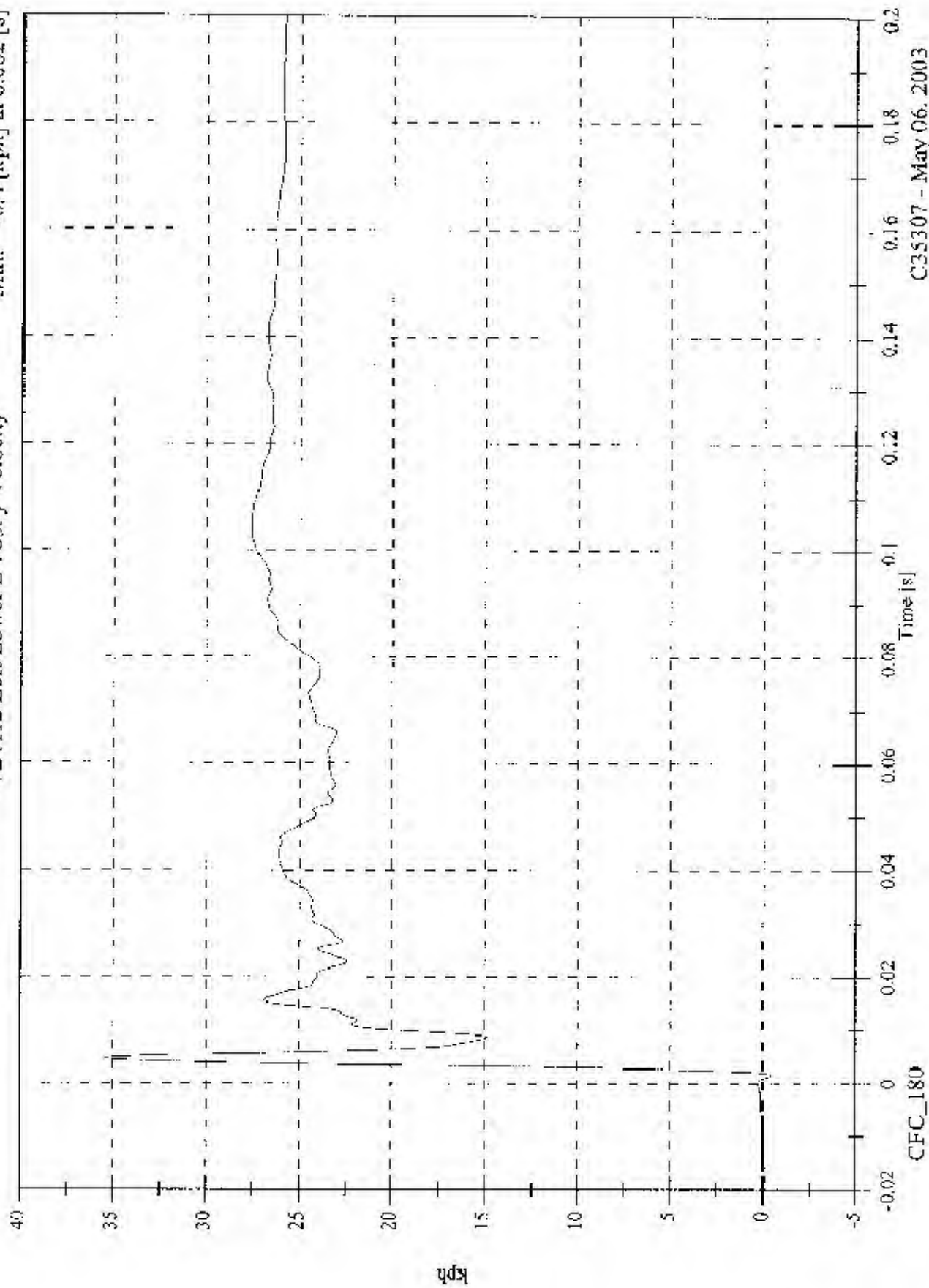


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V2 A12 Left Lower B Post y Velocity

Max: 35.4 [kph] at 0.005 [s]
Min: -0.4 [kph] at 0.002 [s]

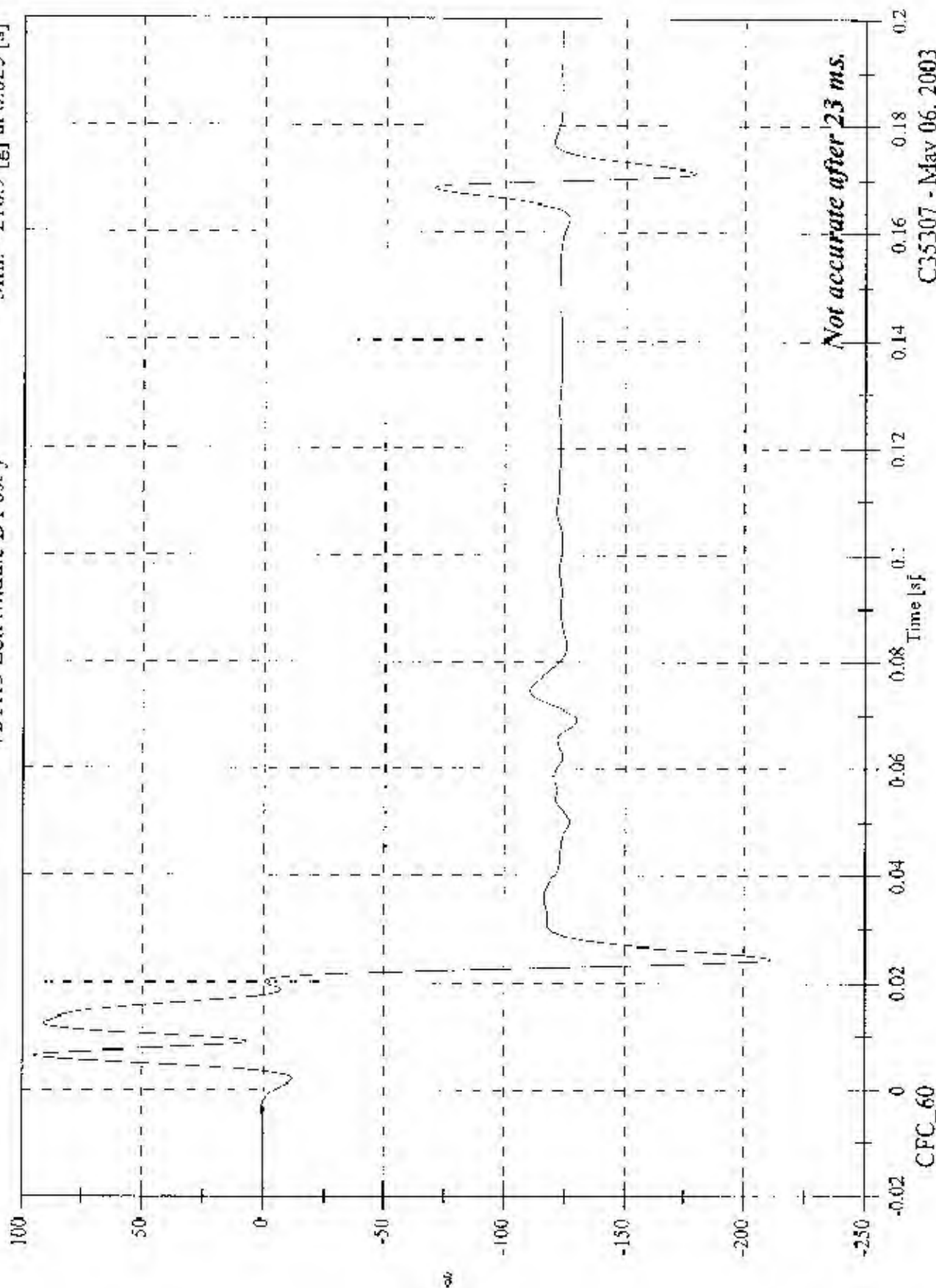


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2003 F4VSS 214D Test 8 2003 Honda Element

V2 A13 Left Middle B Post y

Max: 95.3 [g] at 0.006 [s]
Min: -210.9 [g] at 0.025 [s]

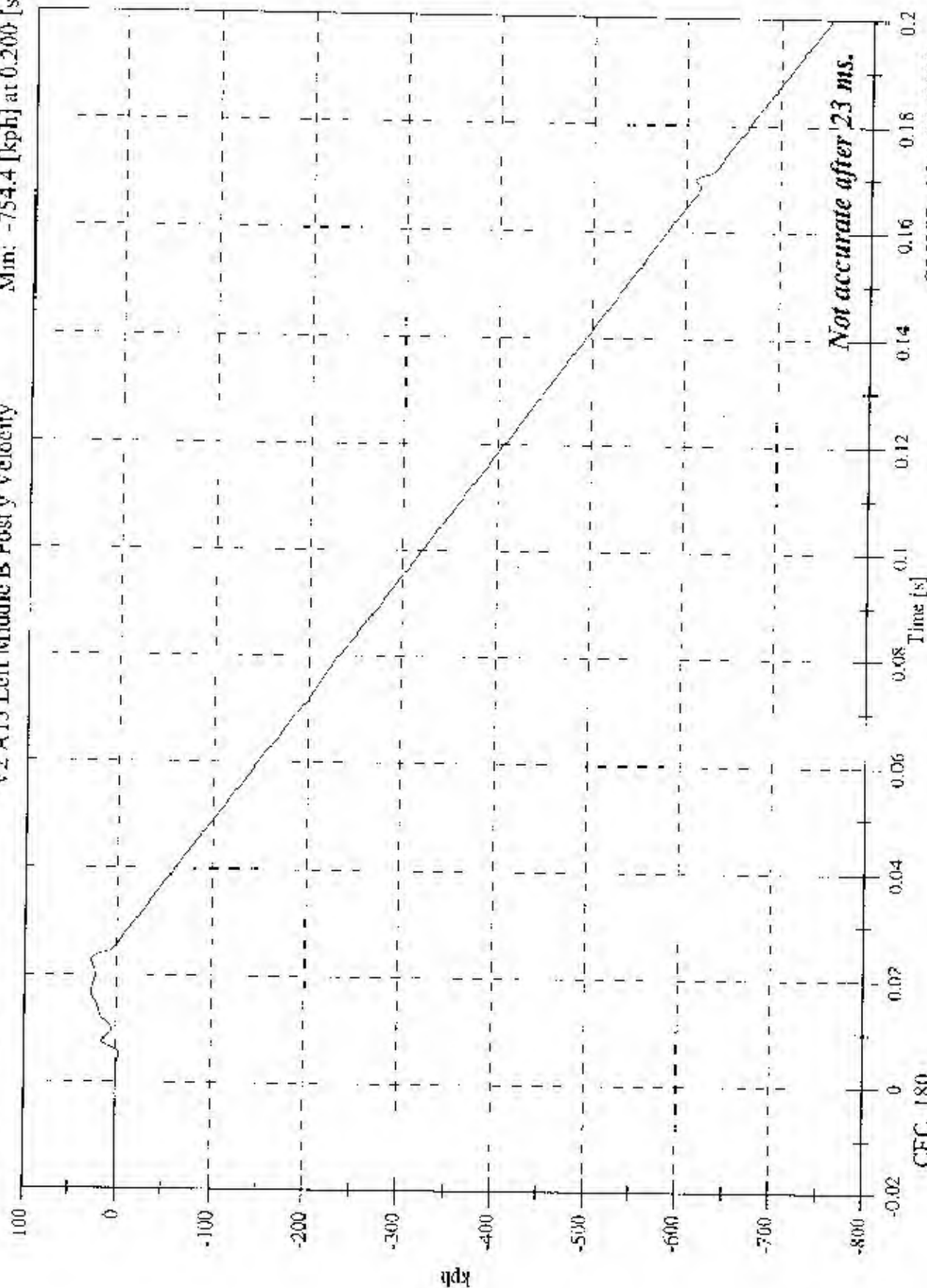


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A13 Left Middle B Post y Velocity

Max: 27.3 [kph] at 0.023 [s]
Min: -754.4 [kph] at 0.200 [s]



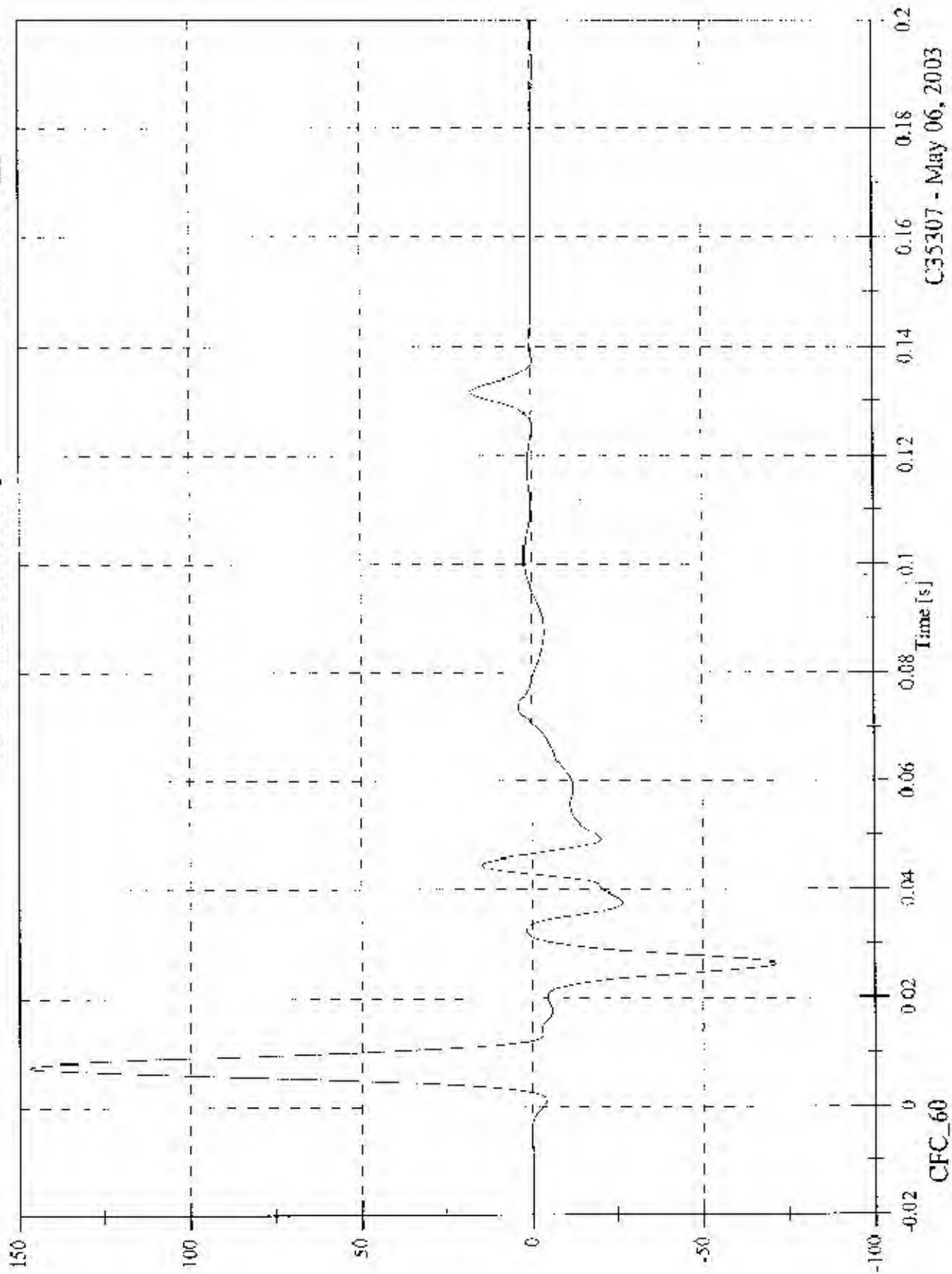
Not accurate after 23 ms.

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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A14 Left Lower A Post y

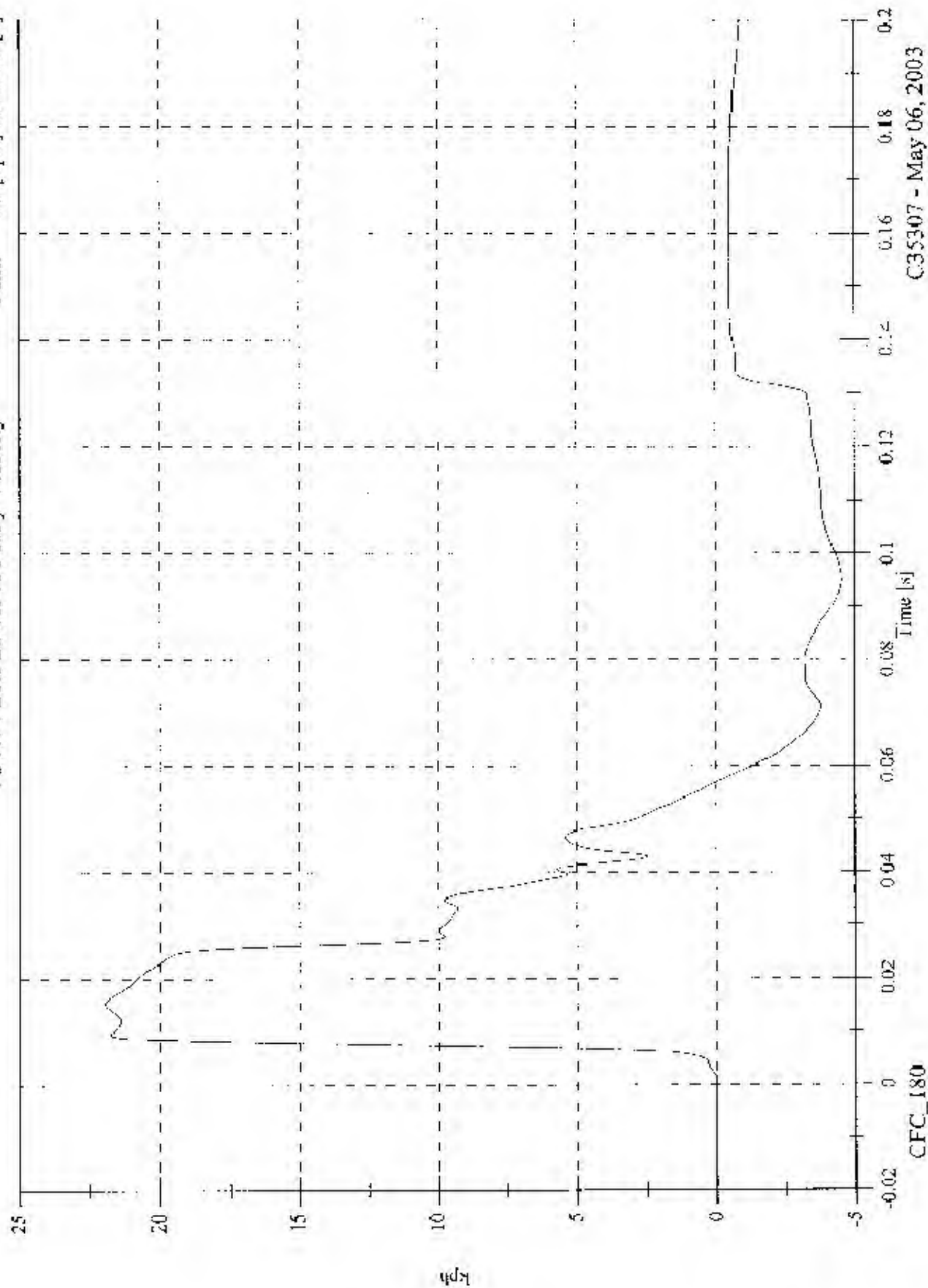
Max: 147.1 [g] at 0.007 [s]
Min: -71.3 [g] at 0.026 [s]



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V2 A14 Left Lower A Post y Velocity

Max: 22.0 [kph] at 0.015 [s]
Min: -4.5 [kph] at 0.095 [s]

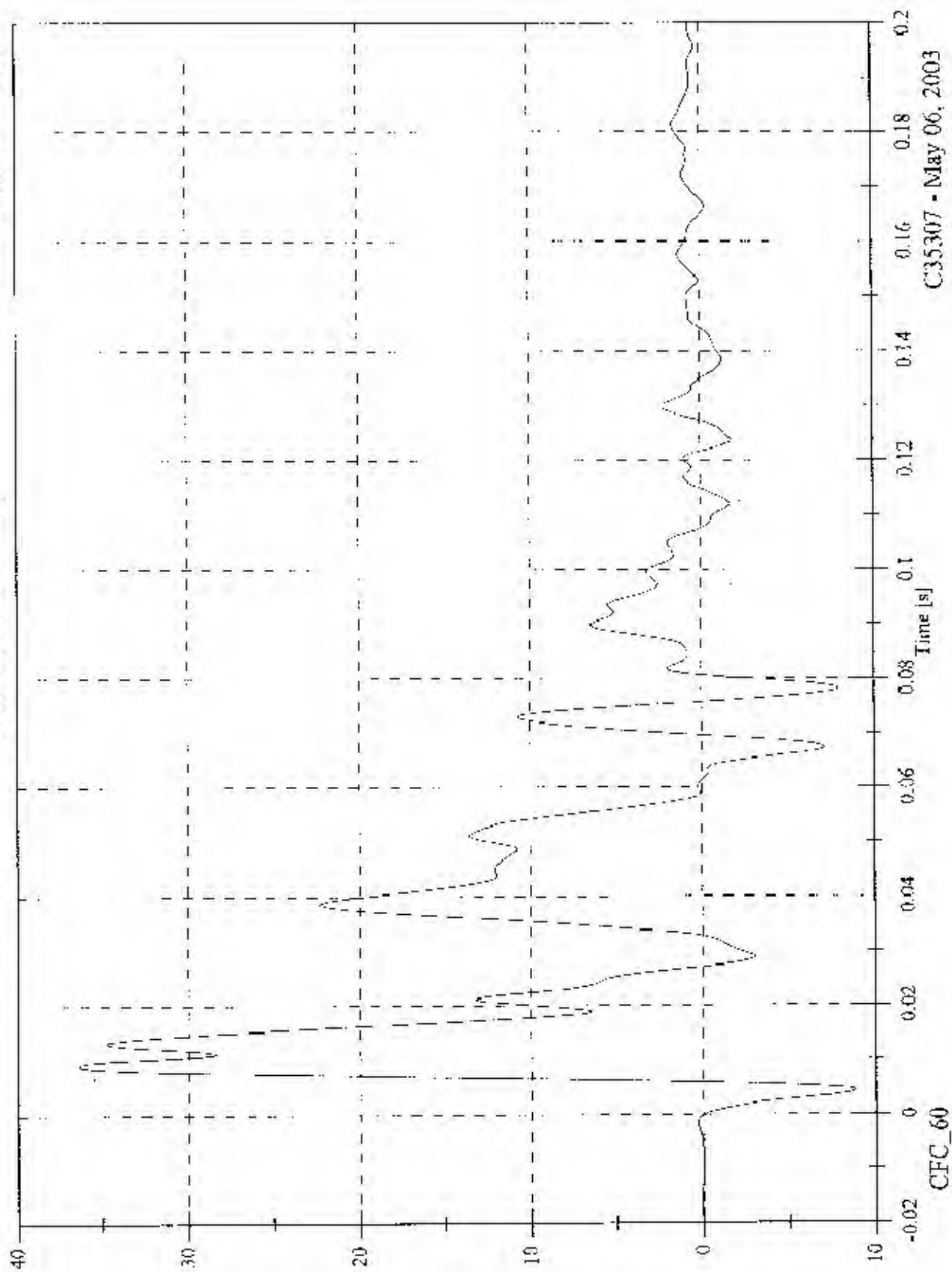


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V2 A15 Left Mid A Post y

Max: 36.4 [g] at 0.009 [s]
Min: -8.9 [g] at 0.004 [s]

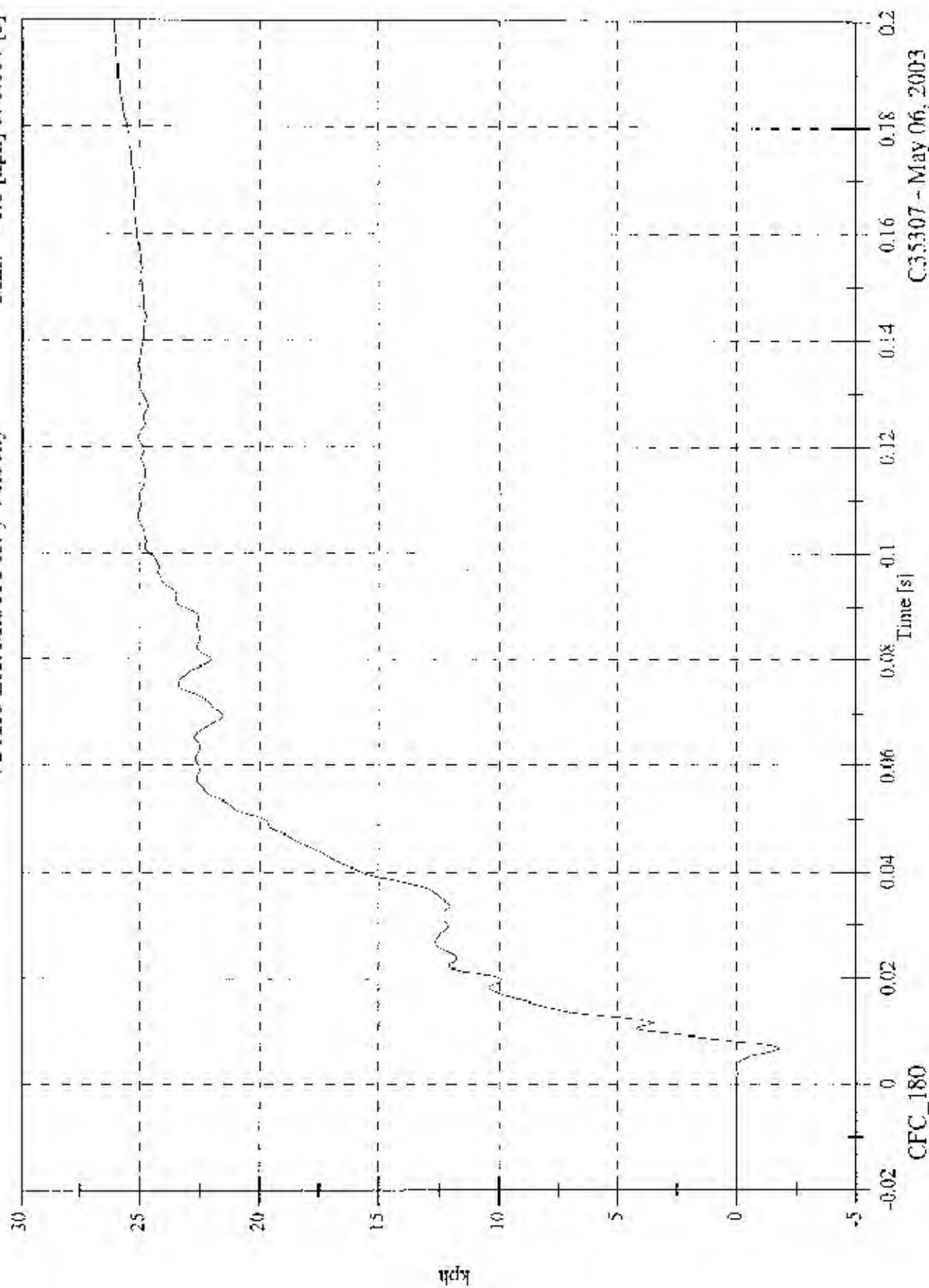


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2003 FIMVSS 214D Test 8 2003 Honda Element

V2 A15 Left Mid A Post y Velocity

Max: 26.1 [kph] at 0.199 [s]
Min: -1.8 [kph] at 0.007 [s]

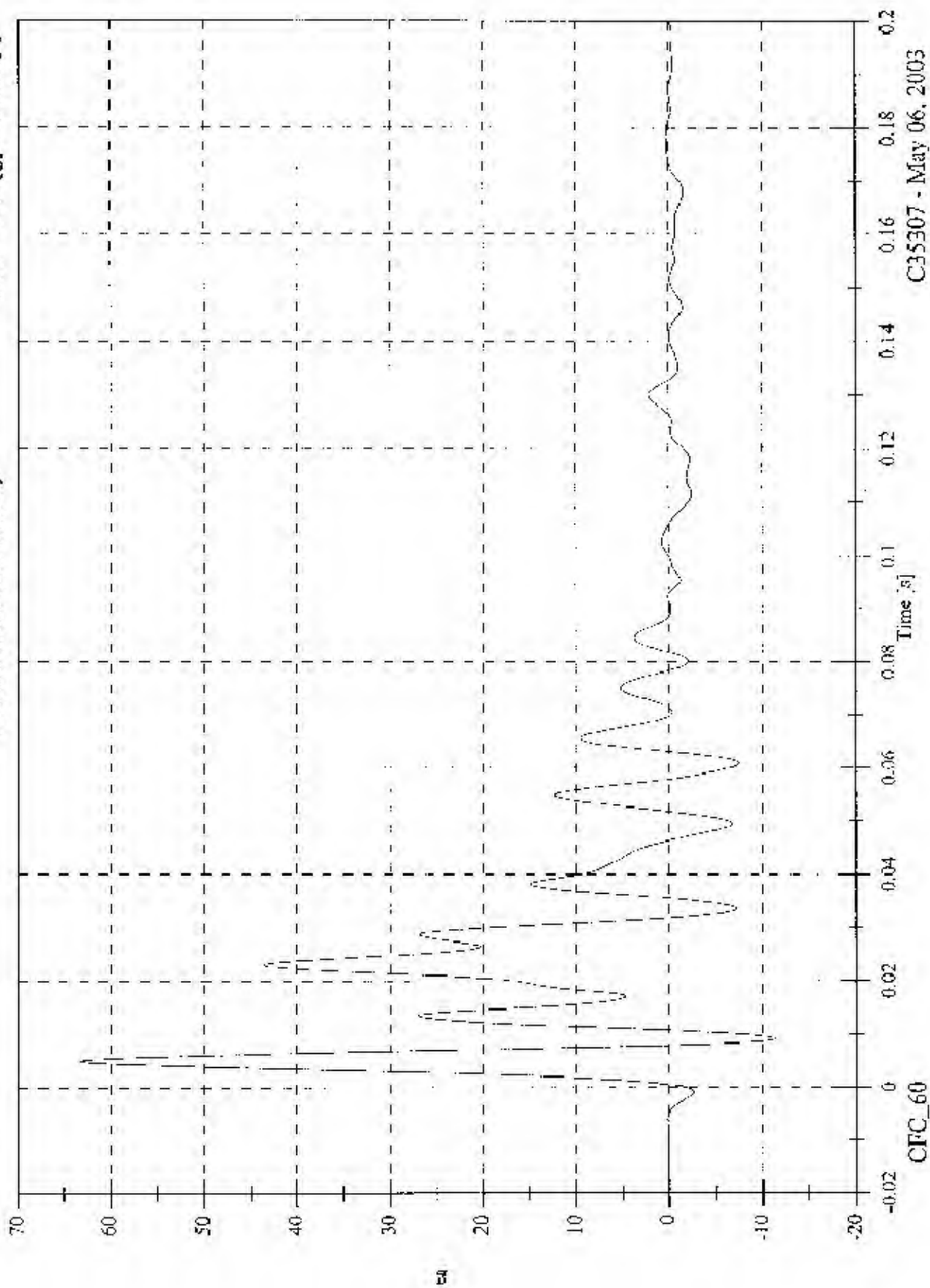


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V2 A16 Front Seat Track y

Max: 63.4 [g] at 0.005 [s]
Min: -11.4 [g] at 0.009 [s]



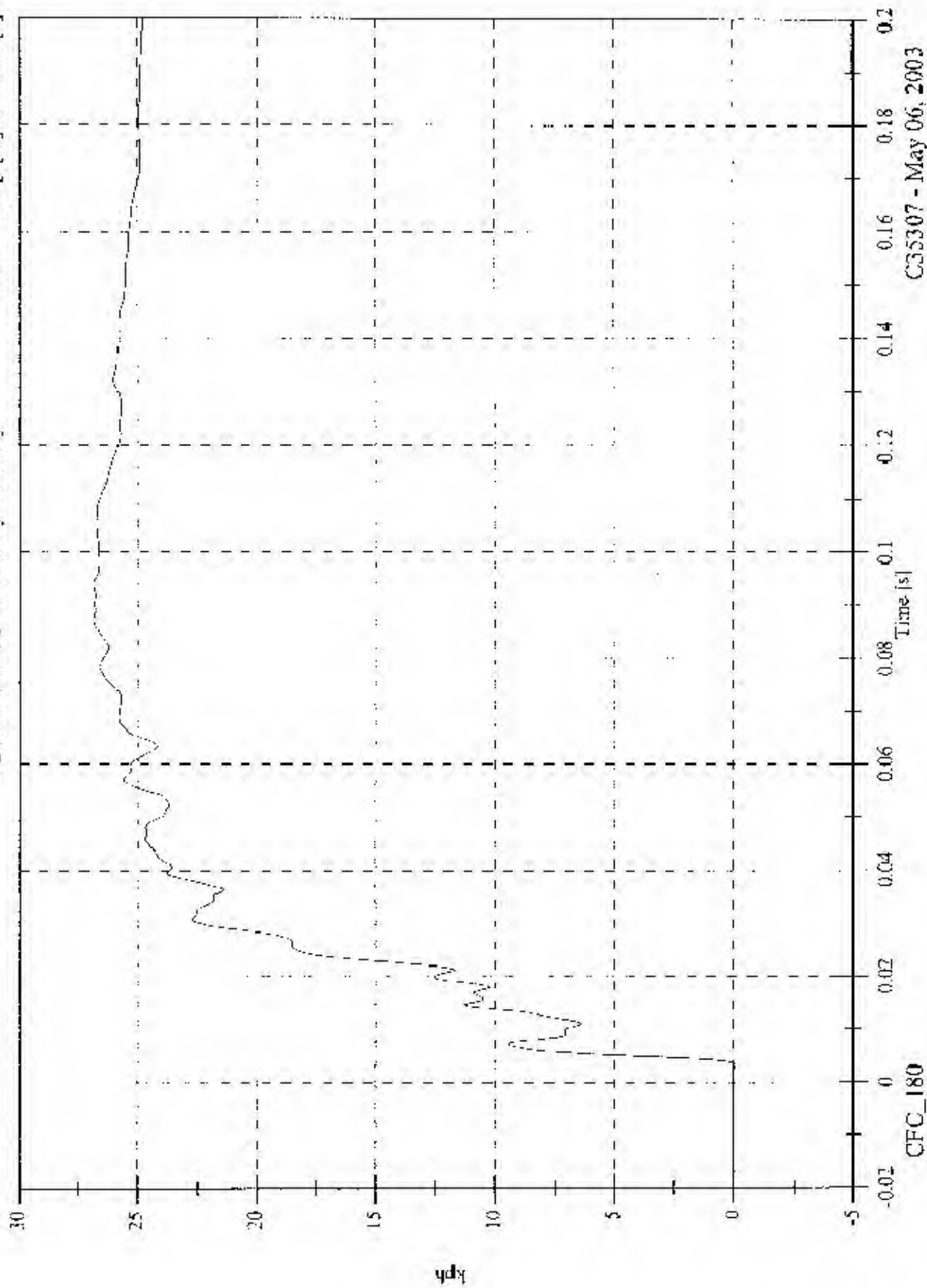
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V2 A16 Front Seat Track y Velocity

Max: 26.9 [kph] at 0.094 [s]

Min: -0.1 [kph] at 0.003 [s]

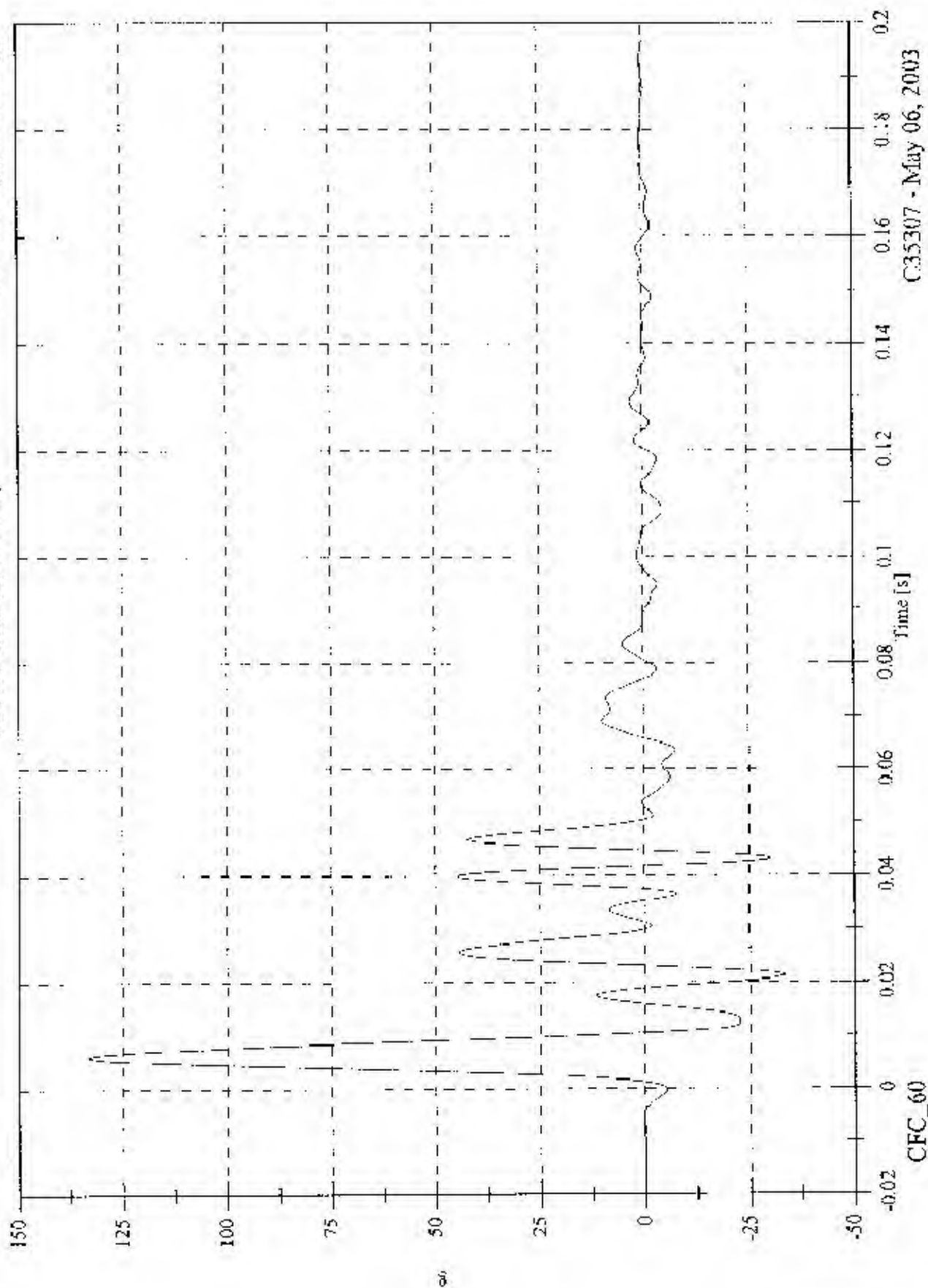


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V2 A17 Rear Seat Track y

Max: 133.3 [g] at 0.006 [s]
Min: -33.2 [g] at 0.021 [s]

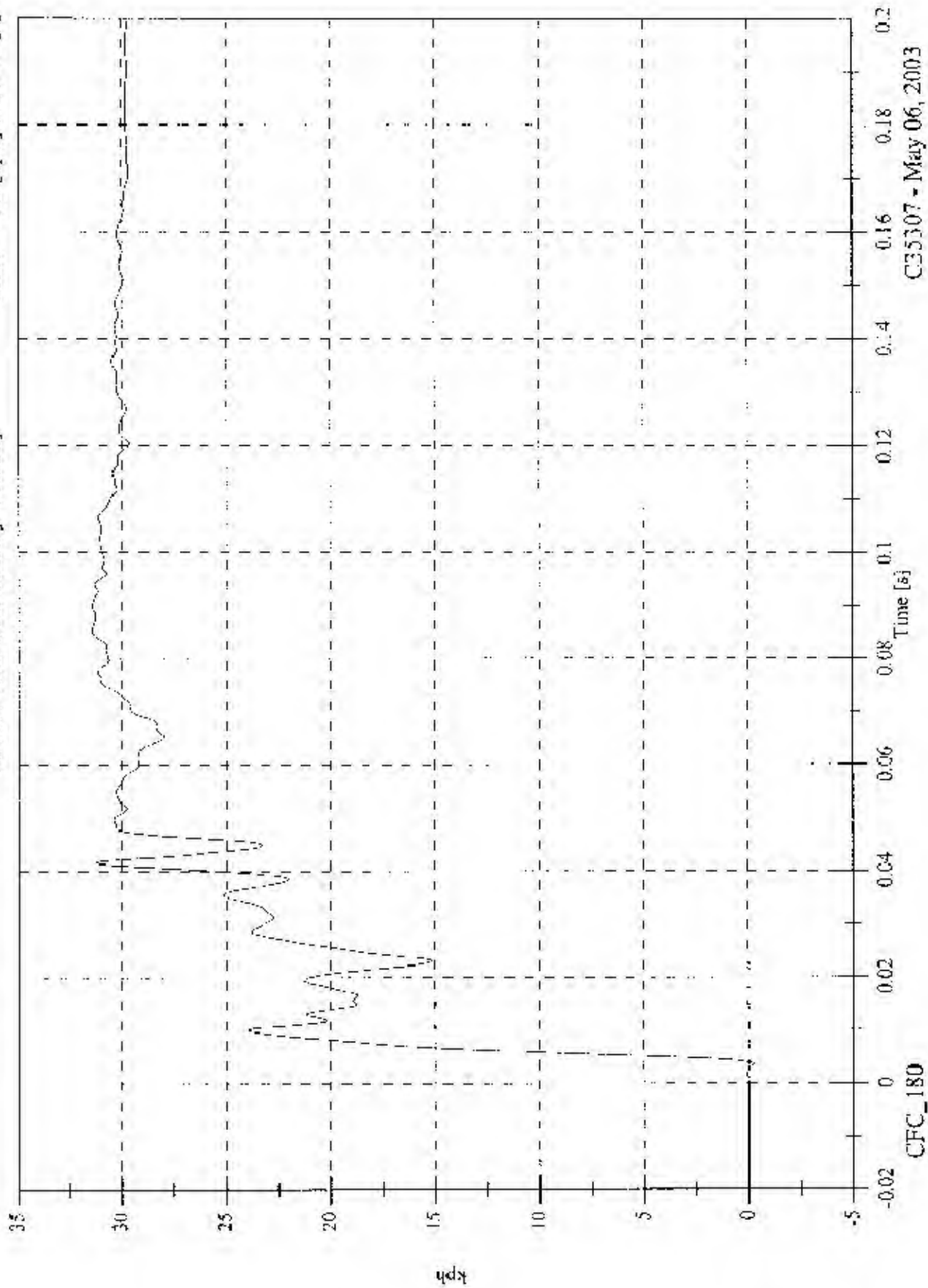


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V2 A17 Rear Seat Track y Velocity

Max: 31.4 [kph] at 0.085 [s]
Min: -0.2 [kph] at 0.003 [s]

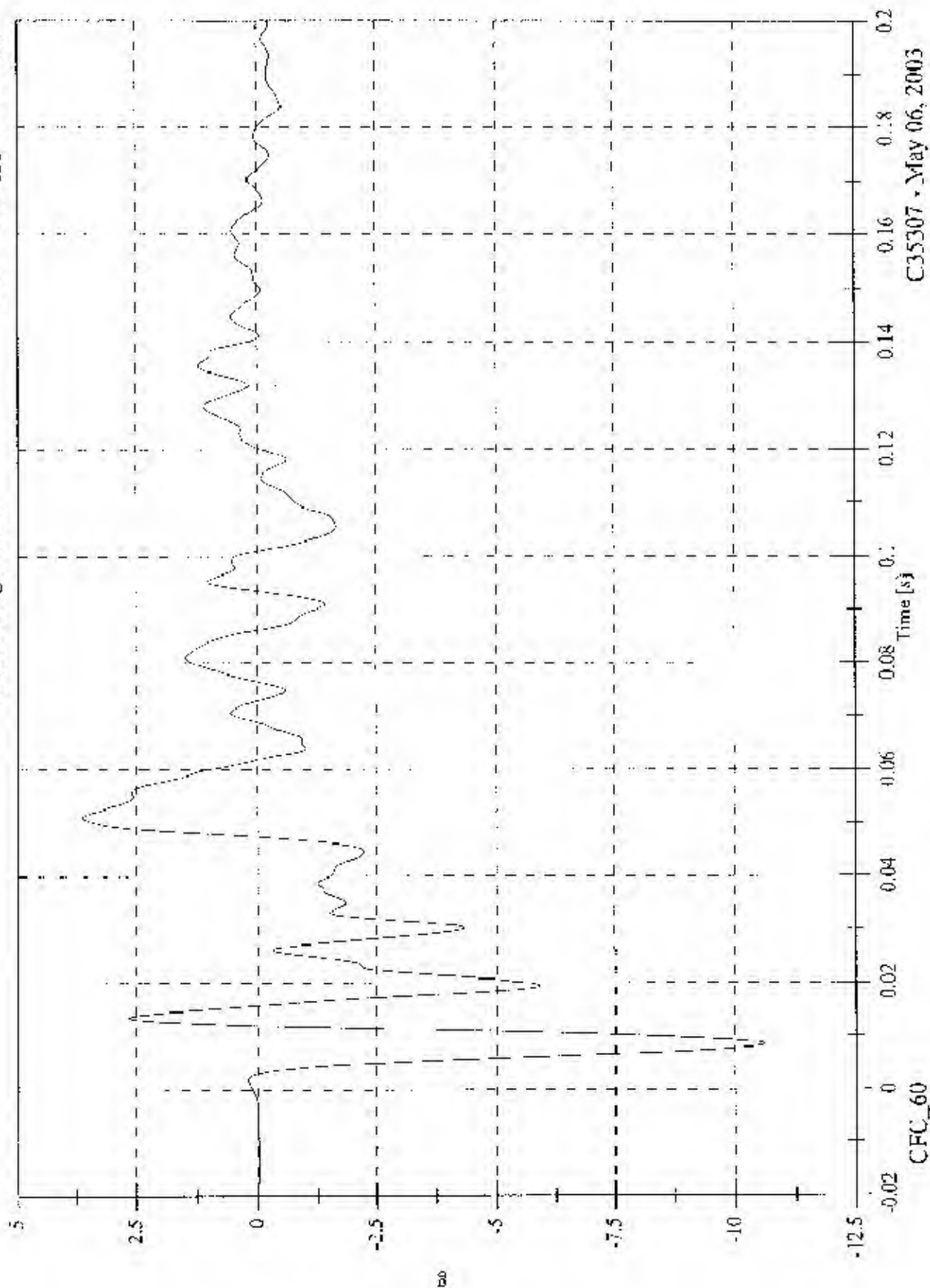


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Max: 3.7 [g] at 0.051 [s]
Min: -10.6 [g] at 0.008 [s]

V2 A18 Target CG x

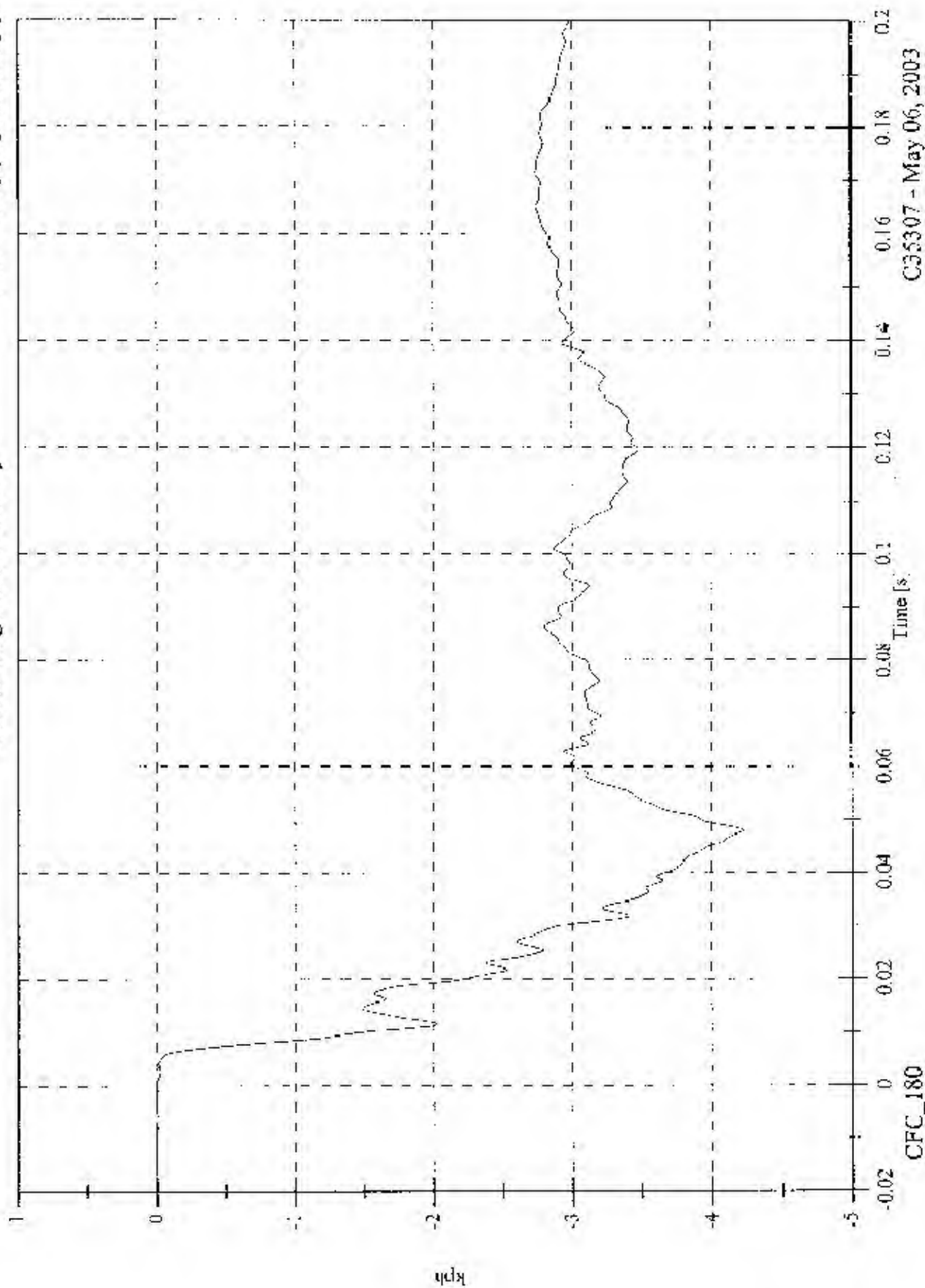


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V2 A18 Target CG x Velocity

Max: 0.0 [kph] at -0.018 [s]
Min: -4.2 [kph] at 0.048 [s]



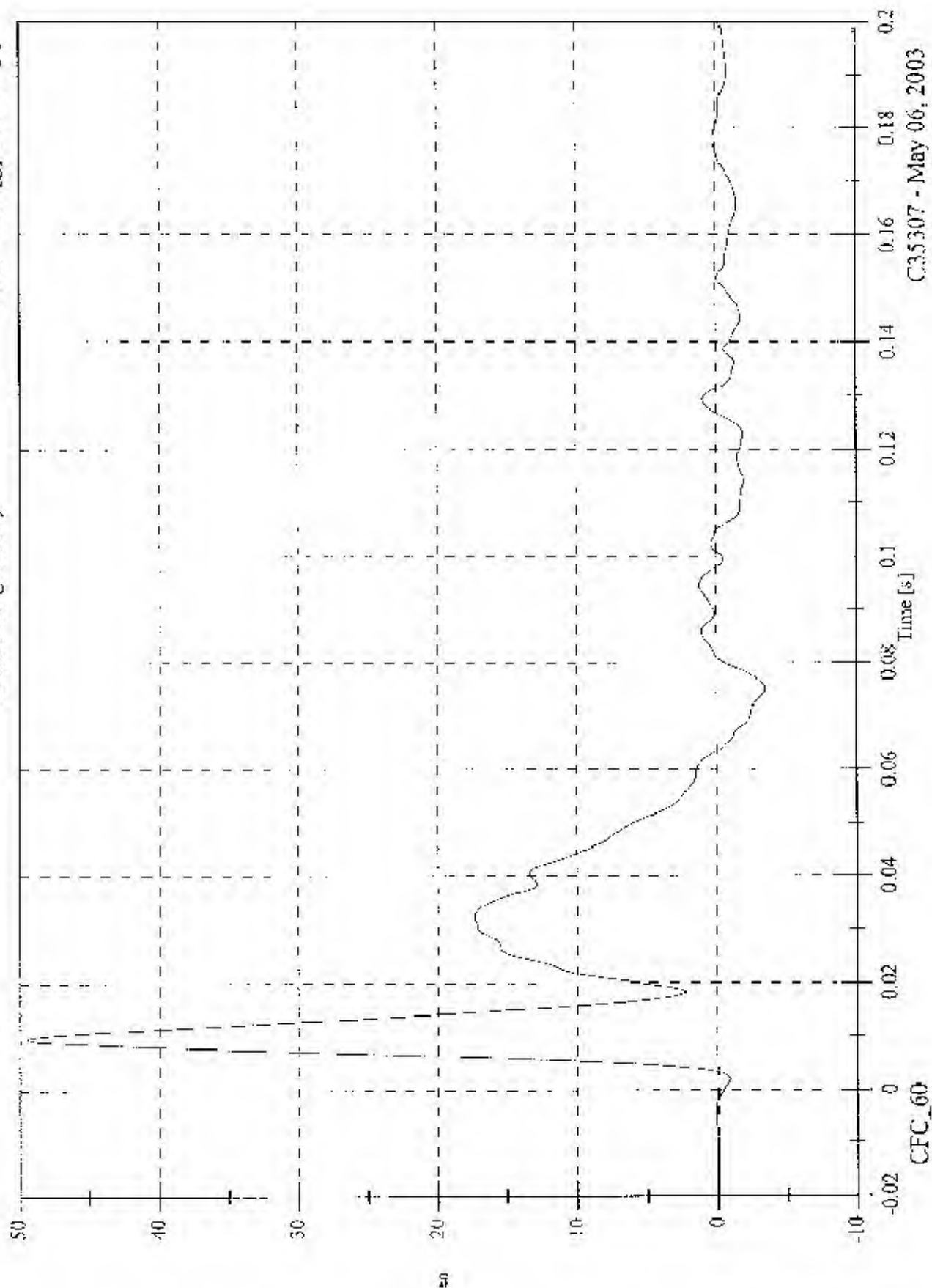
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Max: 49.4 [g] at 0.010 [s]

Min: -3.5 [g] at 0.075 [s]

V2 A18 Target CG y

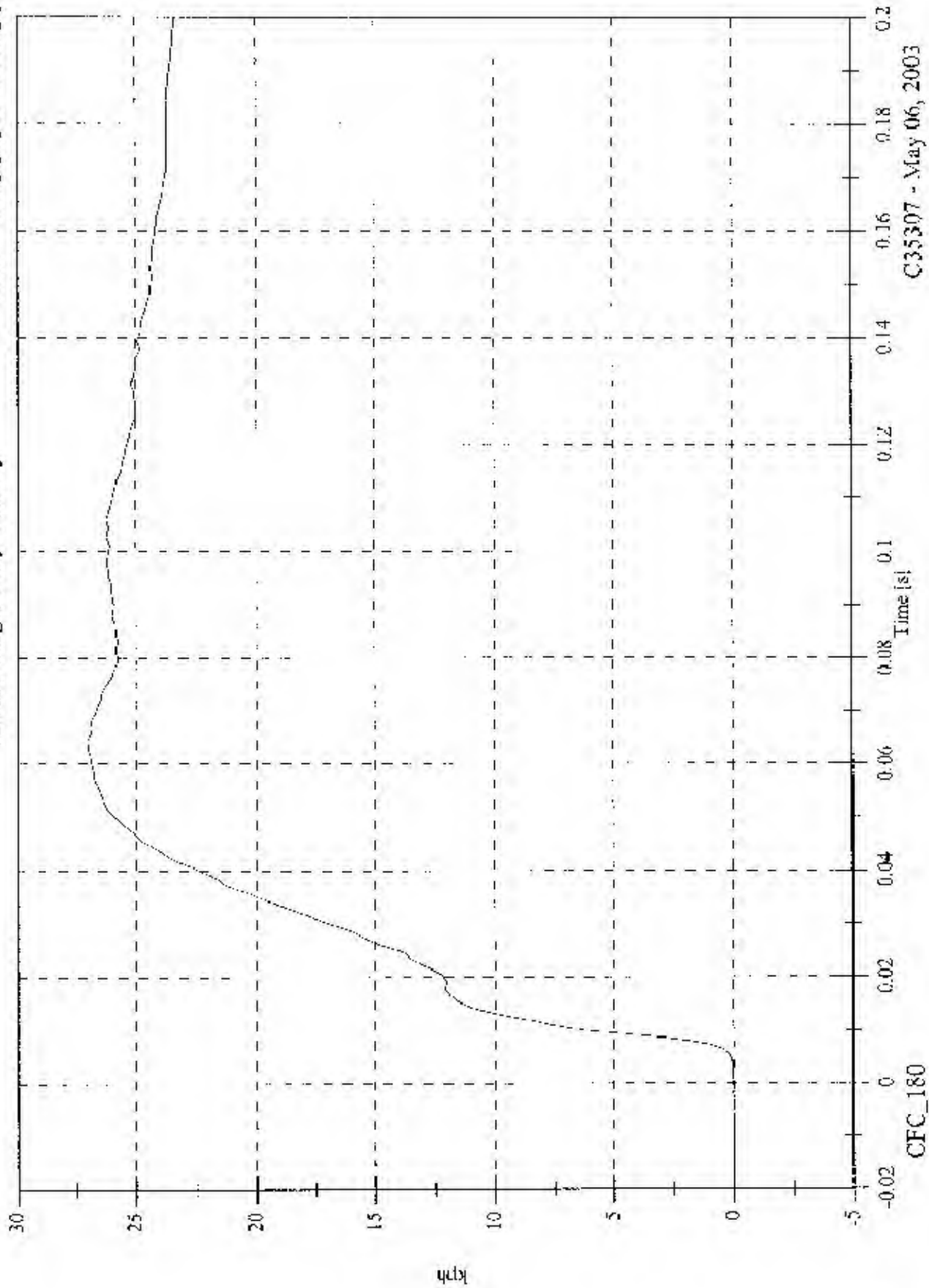


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V2 A18 Target CG y Velocity

Max: 27.0 [kph] at 0.063 [s]
Min: -0.0 [kph] at -0.016 [s]

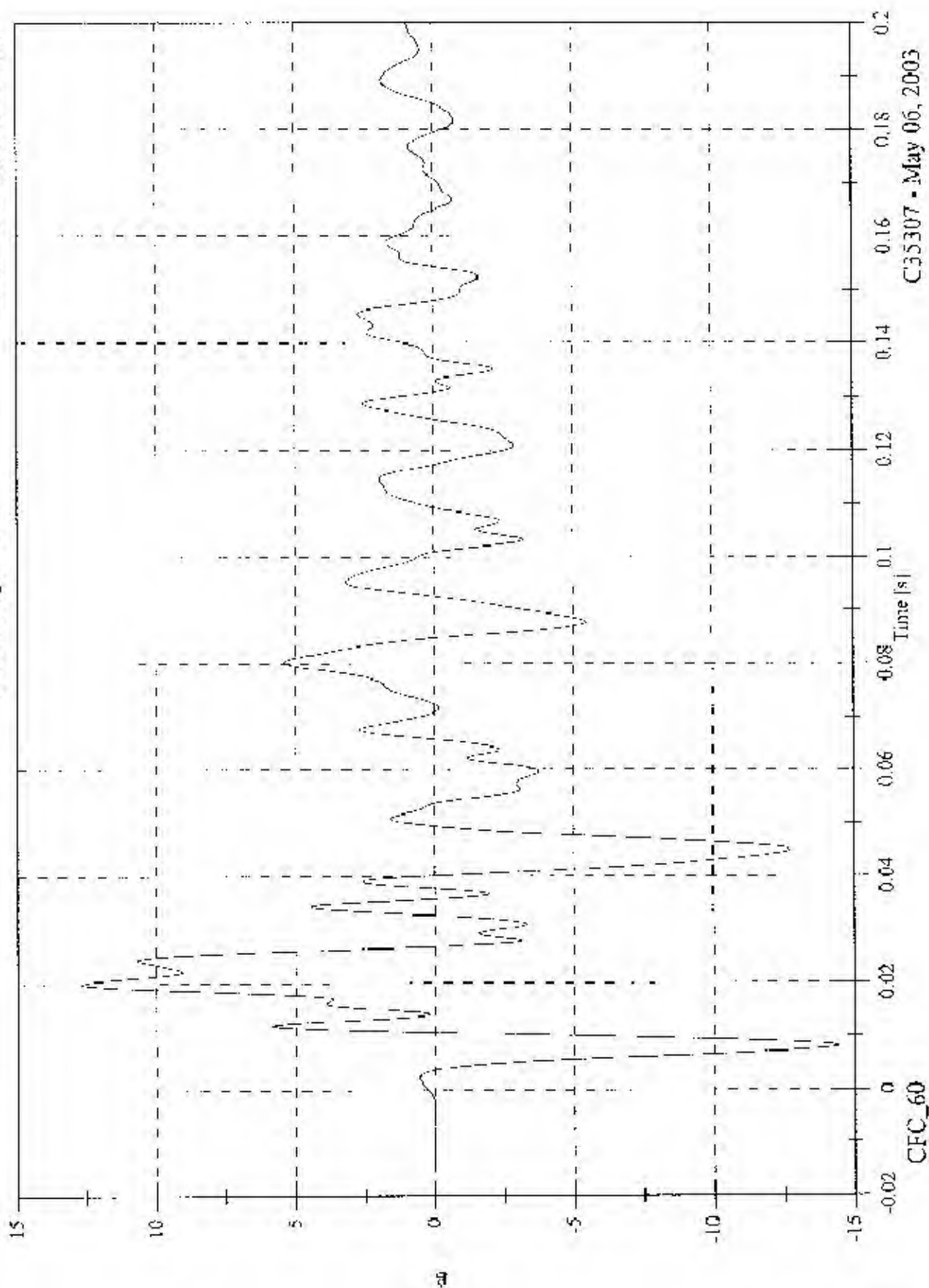


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V2 A18 Target CG Z

Max: 12.7 [g] at 0.020 [s]
Min: -14.5 [g] at 0.008 [s]

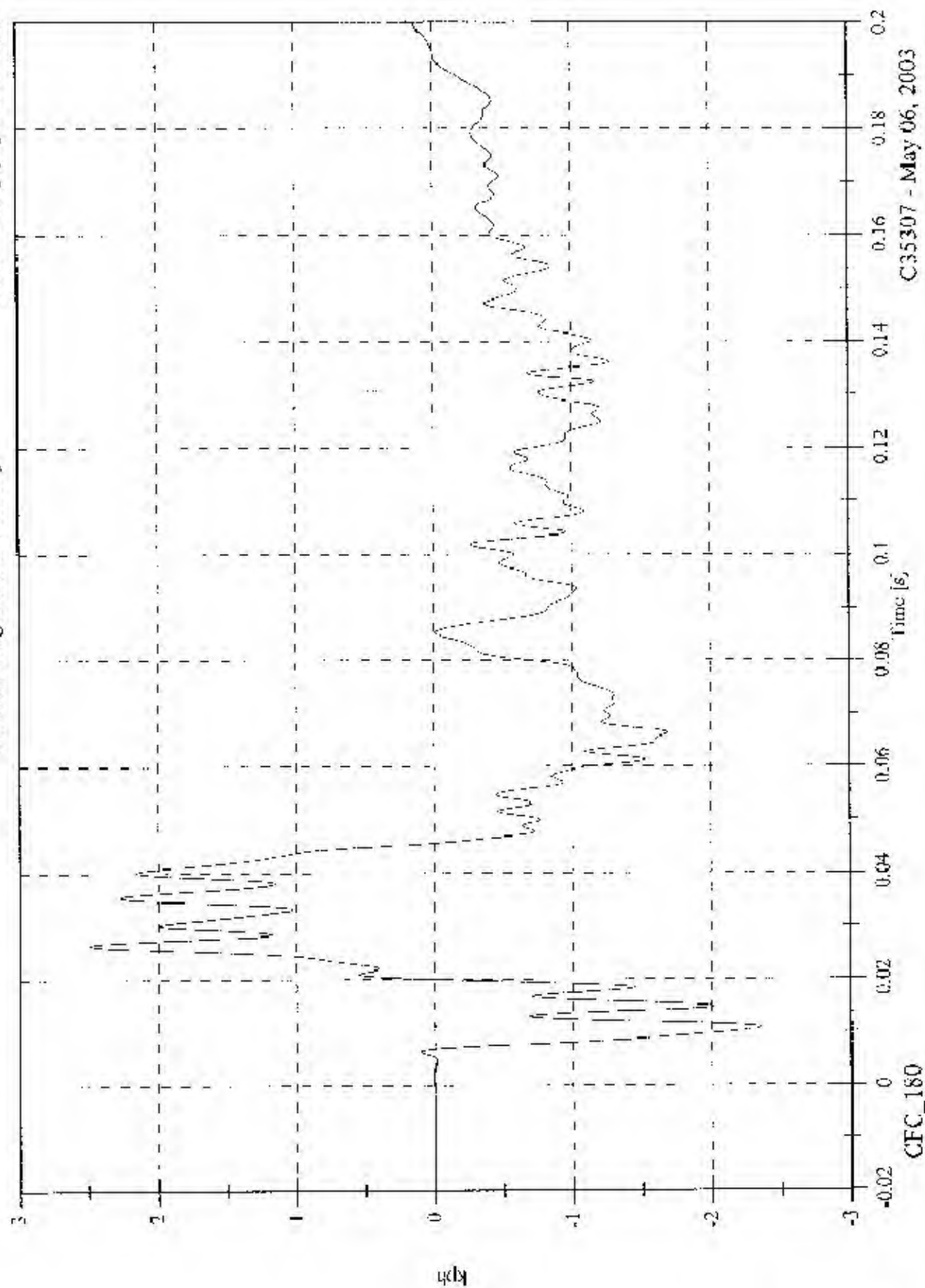


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V2 A18 Target CG z Velocity

Max: 2.5 [kph] at 0.026 [s]
Min: -2.3 [kph] at 0.011 [s]



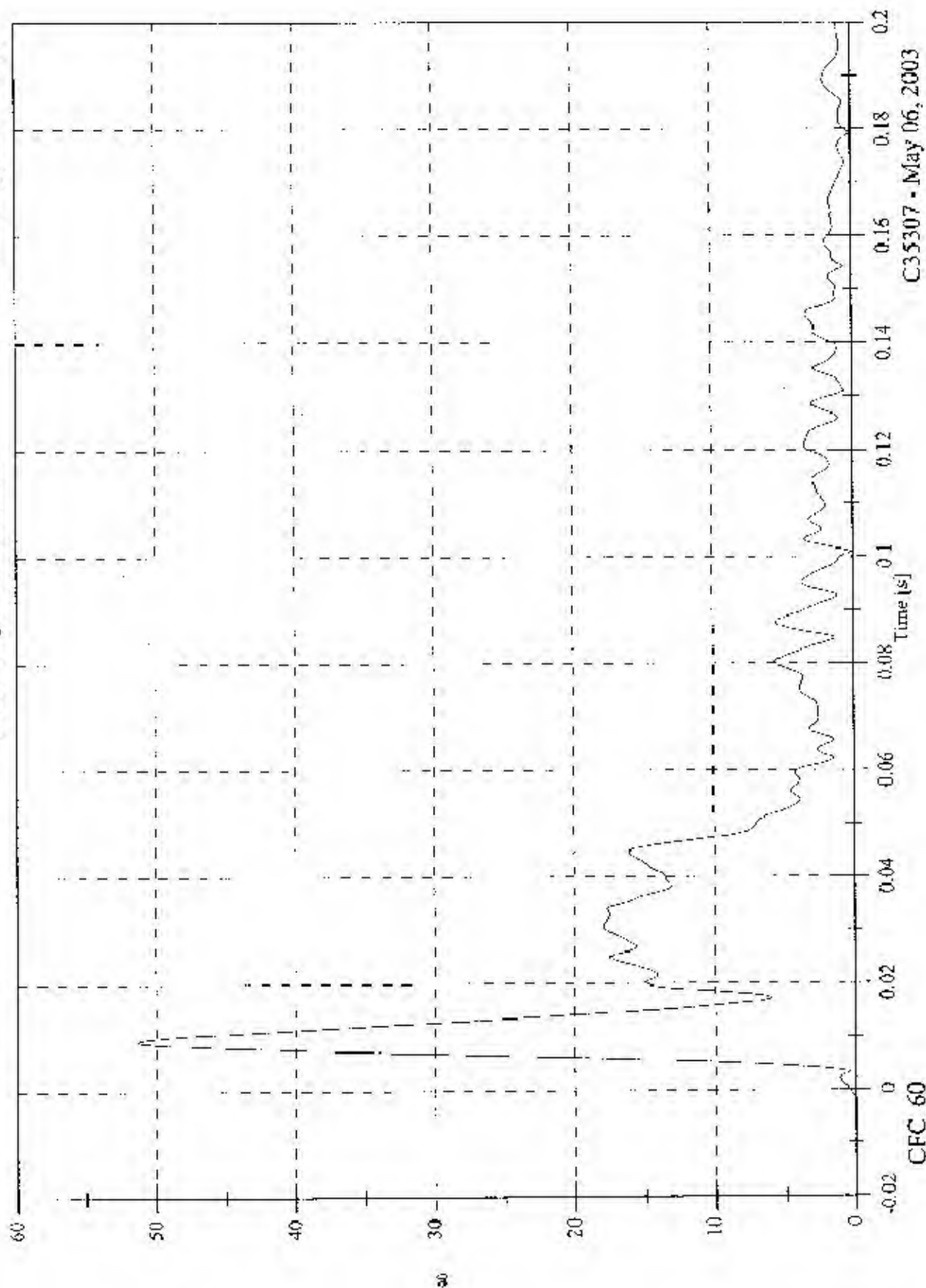
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V2 A18 Target CG Resultant

Max: 51.3 [g] at 0.009 [s]

Min: 0.0 [g] at -0.020 [s]

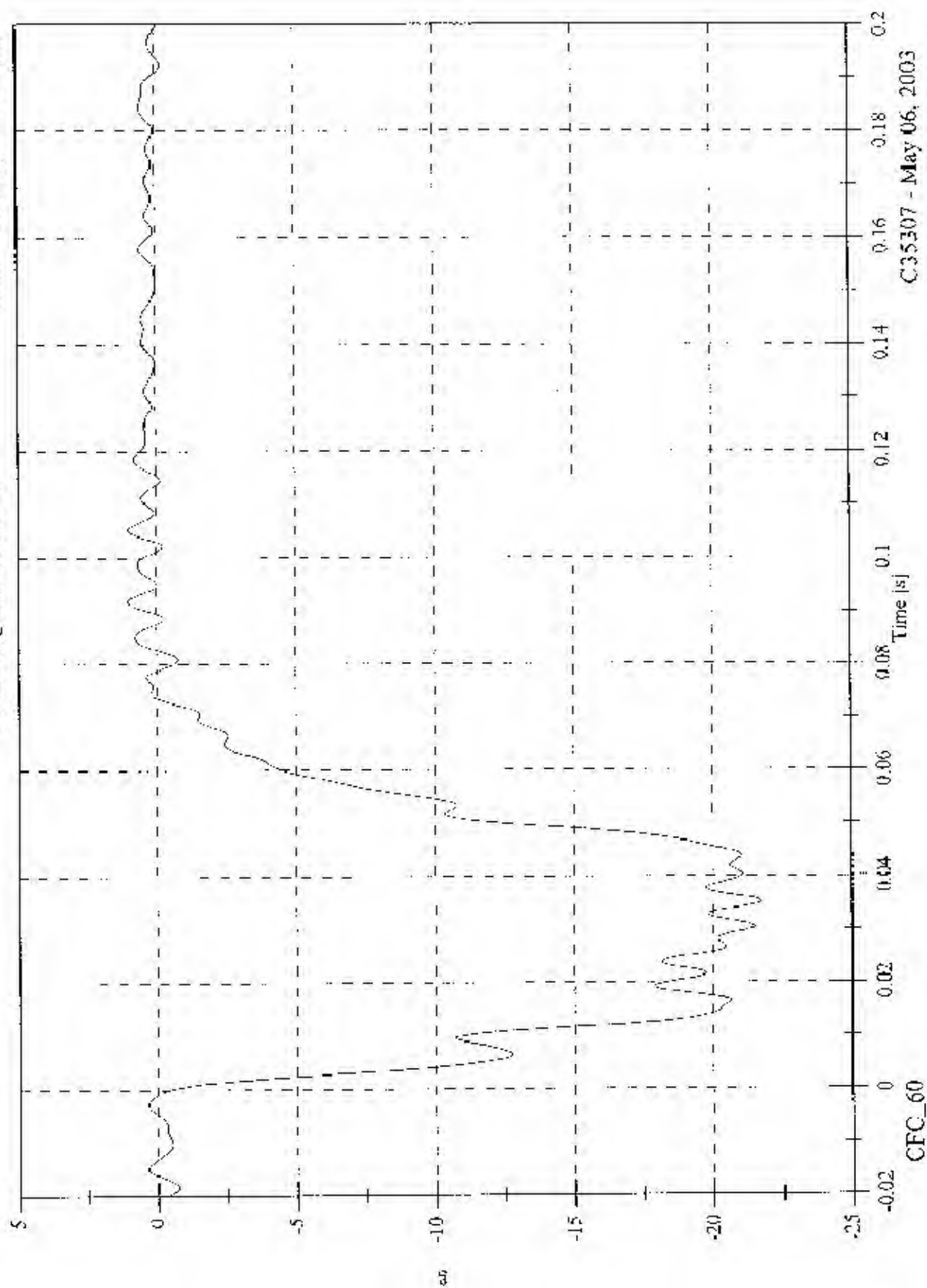


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Max: 1.0 [g] at 0.092 [s]
Min: -21.7 [g] at 0.035 [s]

V1 Moving Barrier CG X

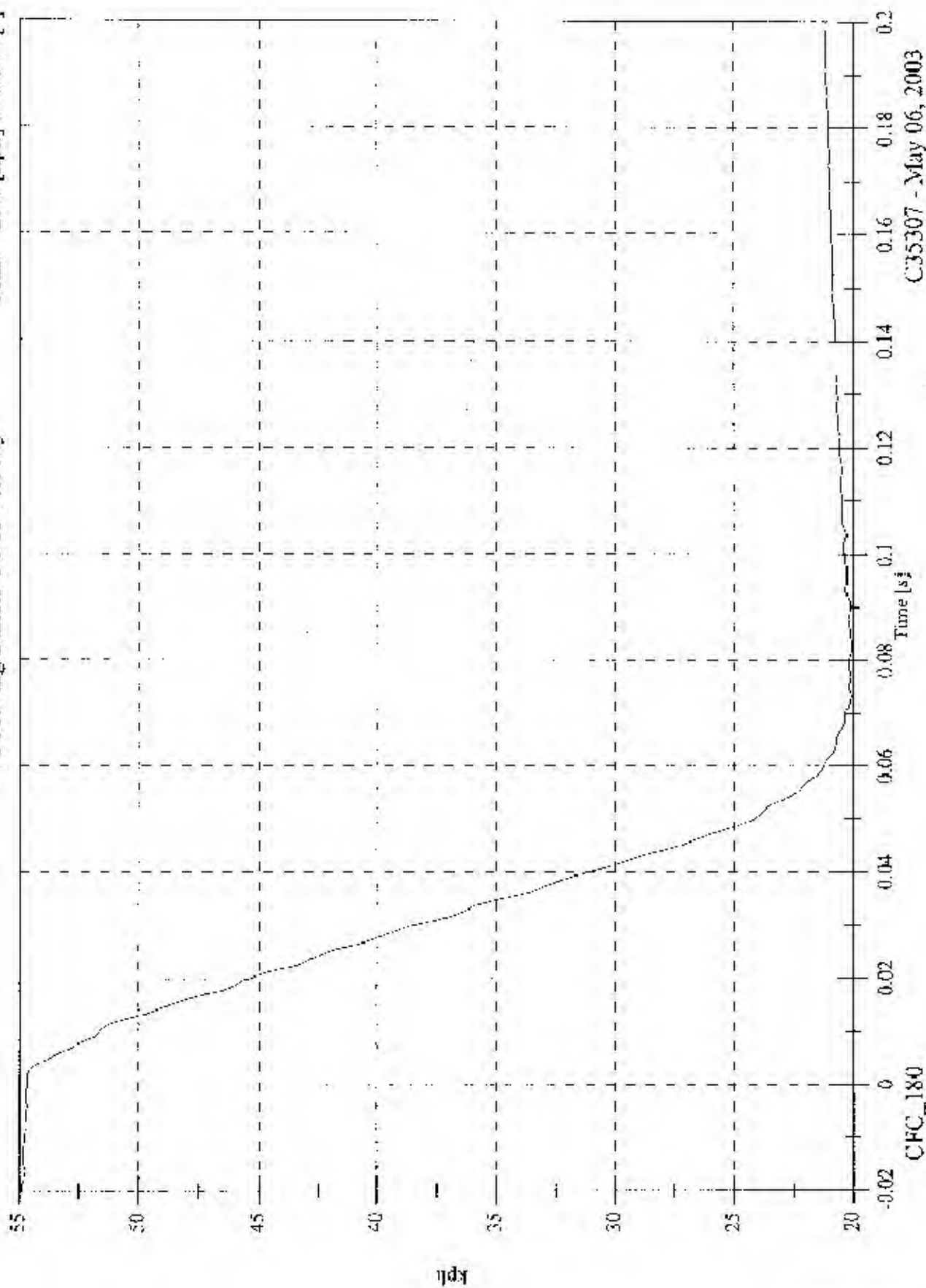


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Max: 54.9 [kph] at -0.020 [s]
 Min: 20.0 [kph] at 0.082 [s]

VI Moving Barrier CG X Velocity



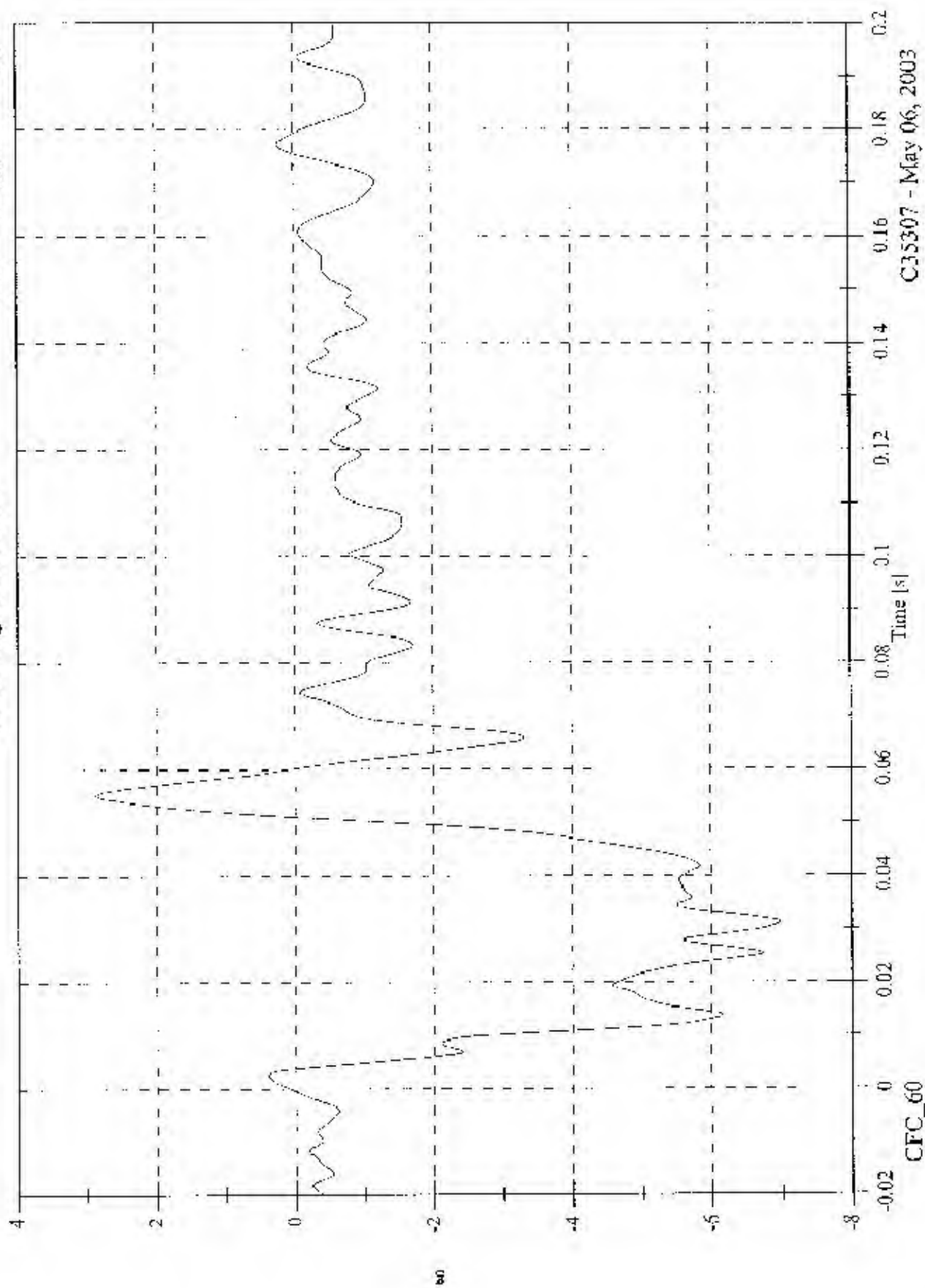
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VI Moving Barrier CG Y

Max: 2.9 [g] at 0.055 [s]

Min: -7.0 [g] at 0.031 [s]

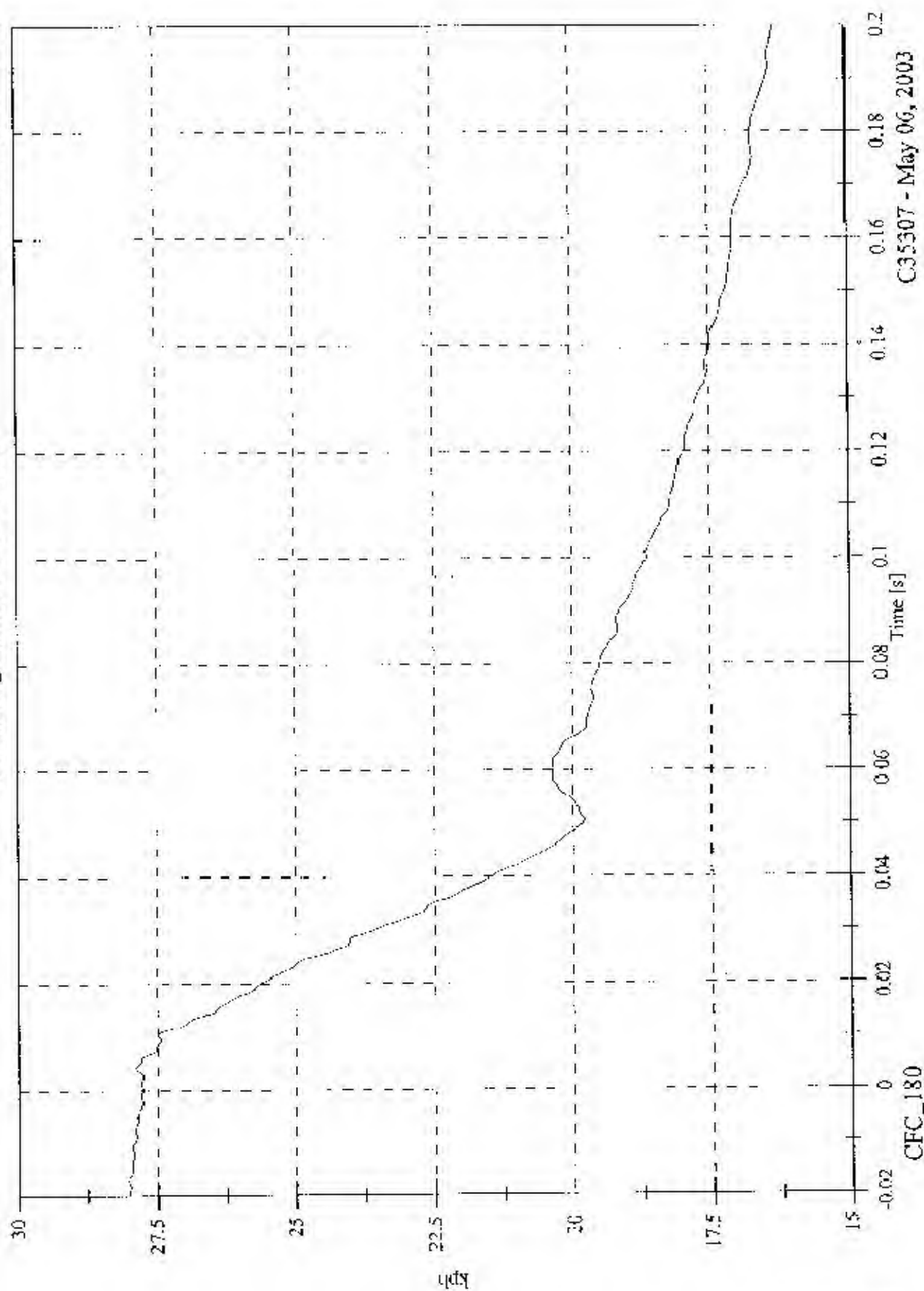


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Max: 28.0 [kph] at -0.017 [s]
Min: 16.3 [kph] at 0.200 [s]

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V1 Moving Barrier CG Y Velocity

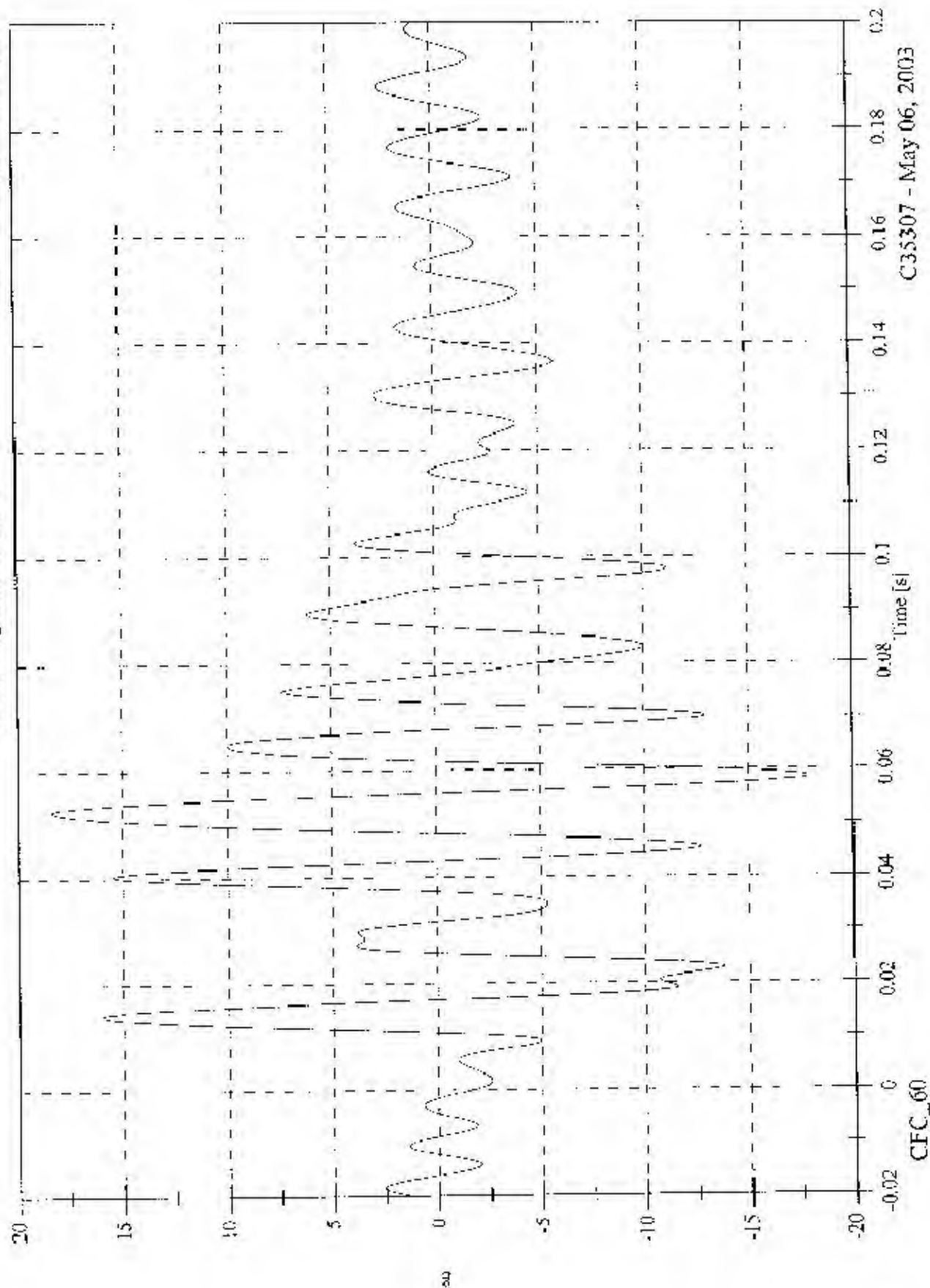


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CFC_180

Max: 18.4 [g] at 0.052 [s]
Min: -17.9 [g] at 0.059 [s]

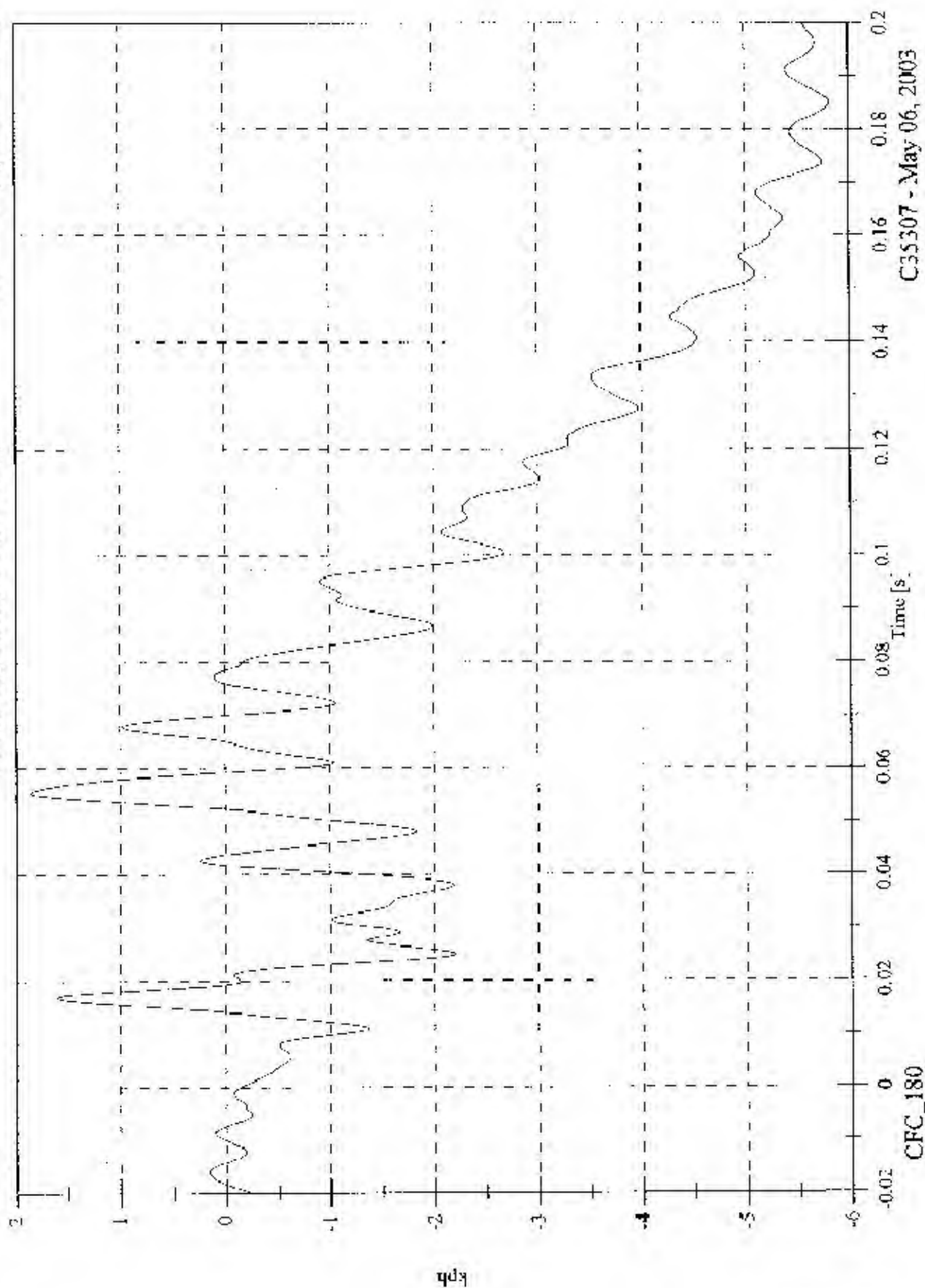
V1 Moving Barrier CG Z



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V1 Moving Barrier CG Z Velocity

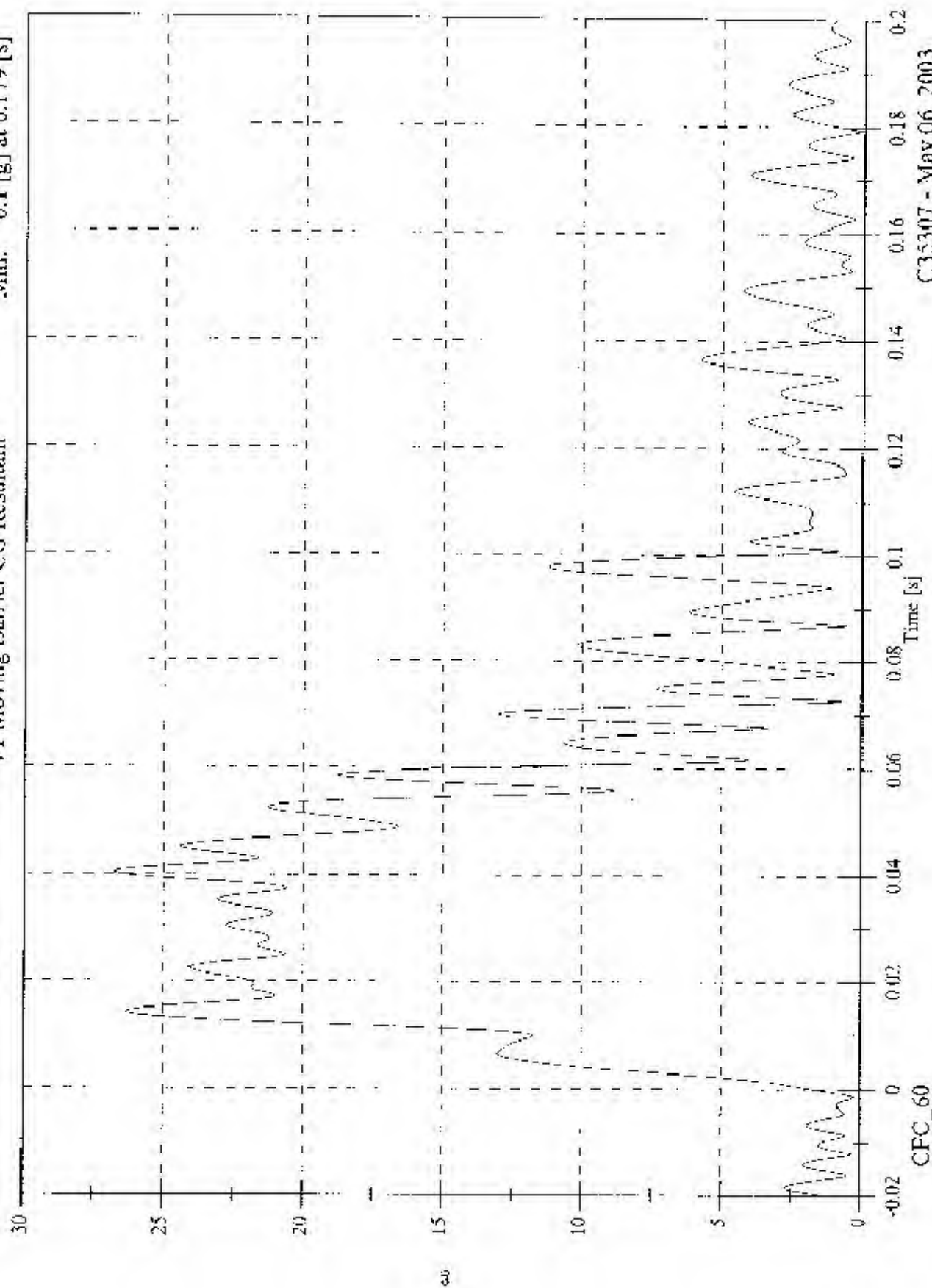
Max: 1.9 [kph] at 0.055 [s]
Min: -5.8 [kph] at 0.185 [s]



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Max: 26.7 [g] at 0.040 [s]
Min: 0.1 [g] at 0.179 [s]

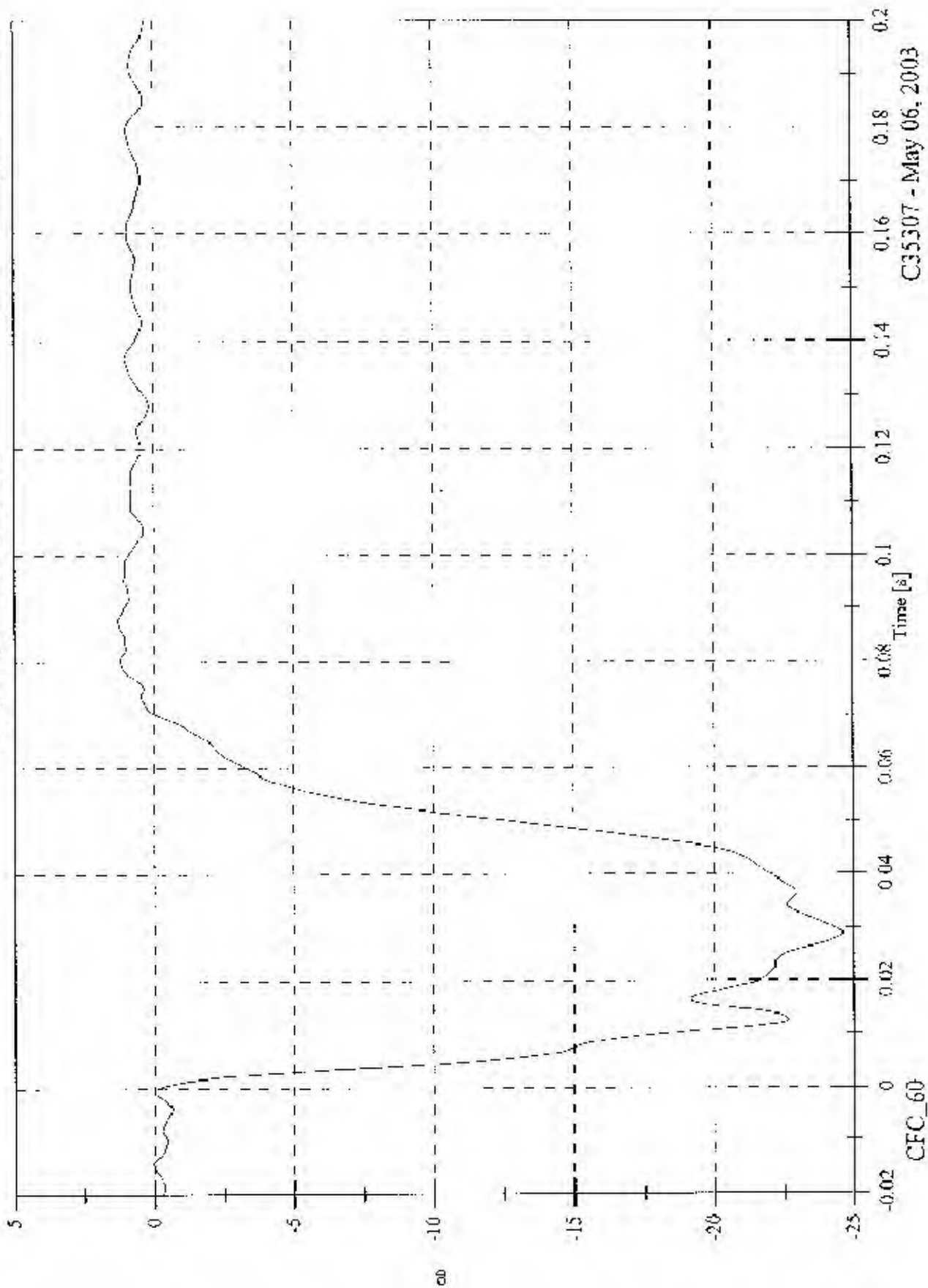
V1 Moving Barrier CG Resultant



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VI Moving Barrier Left Rail X

Max: 1.3 [g] at 0.088 [s]
Min: -24.6 [g] at 0.029 [s]

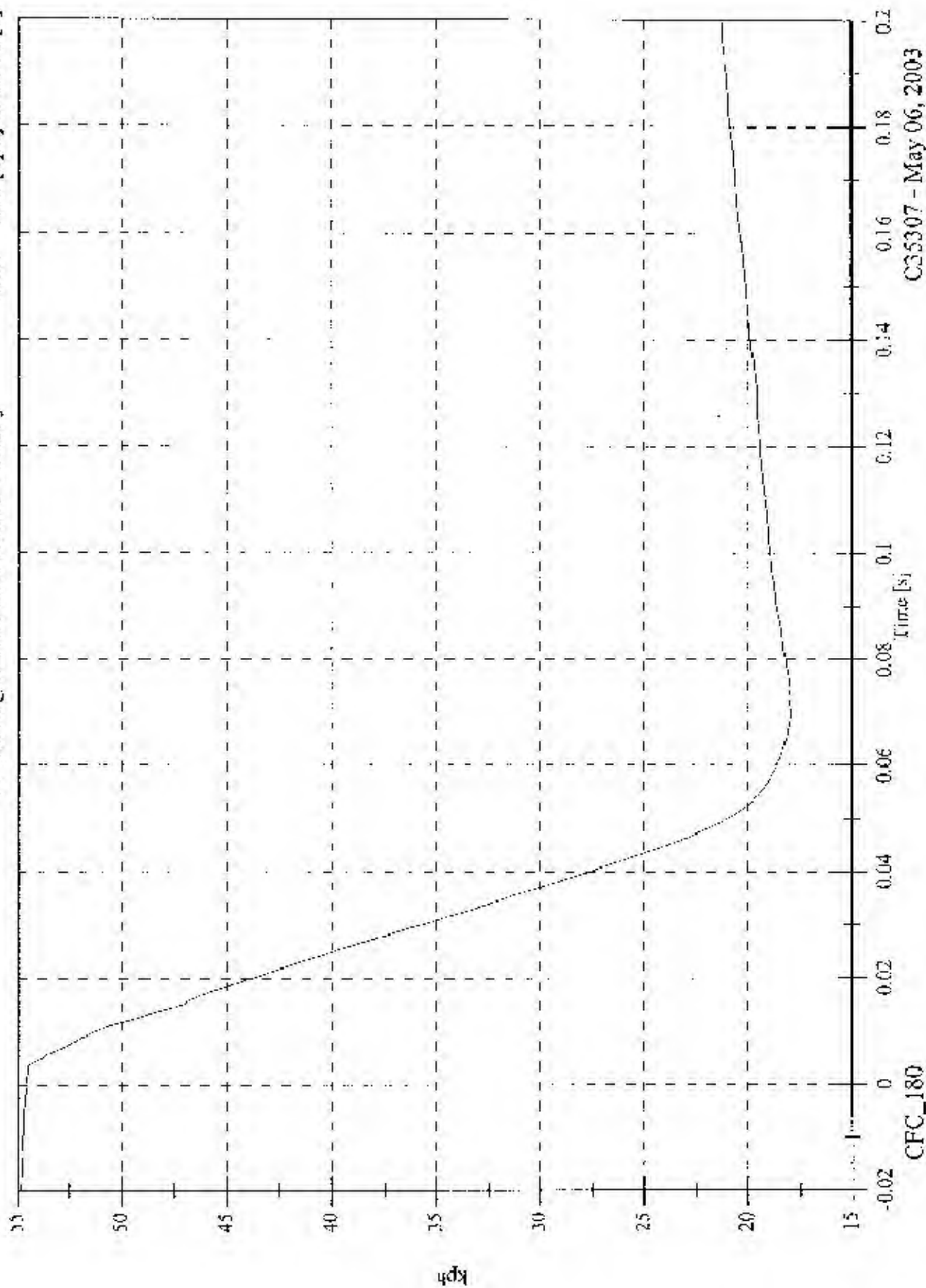


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Max: 54.9 [kph] at -0.019 [s]
Min: 18.0 [kph] at 0.070 [s]

VI Moving Barrier Left Rail X Velocity



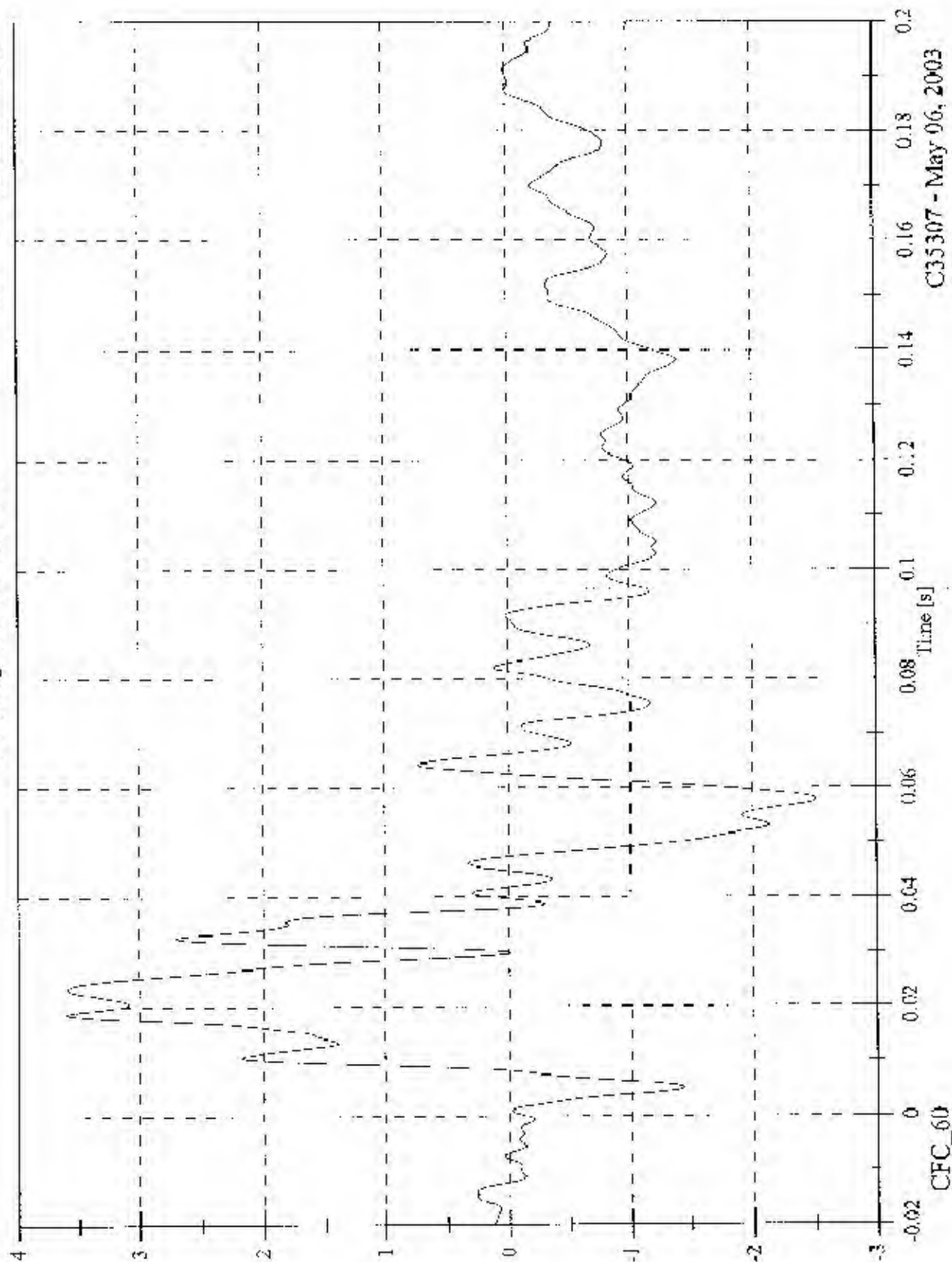
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Max: 3.6 [g] at 0.019 [s]

Min: -2.5 [g] at 0.058 [s]

V1 Moving Barrier Left Rail Y

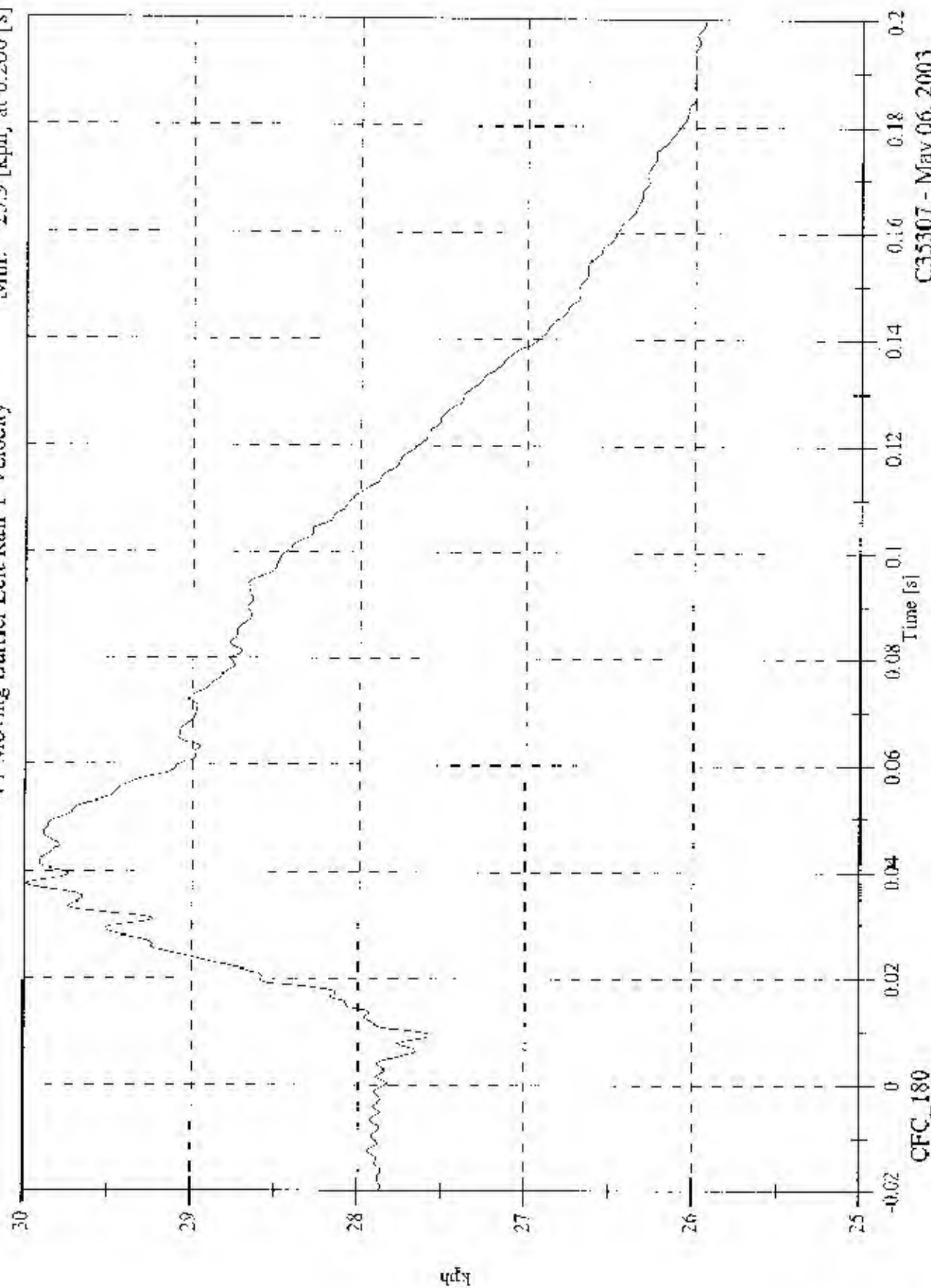


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Max: 30.0 [kph] at 0.037 [s]
 Min: 25.9 [kph] at 0.200 [s]

V1 Moving Barrier Left Rail Y Velocity

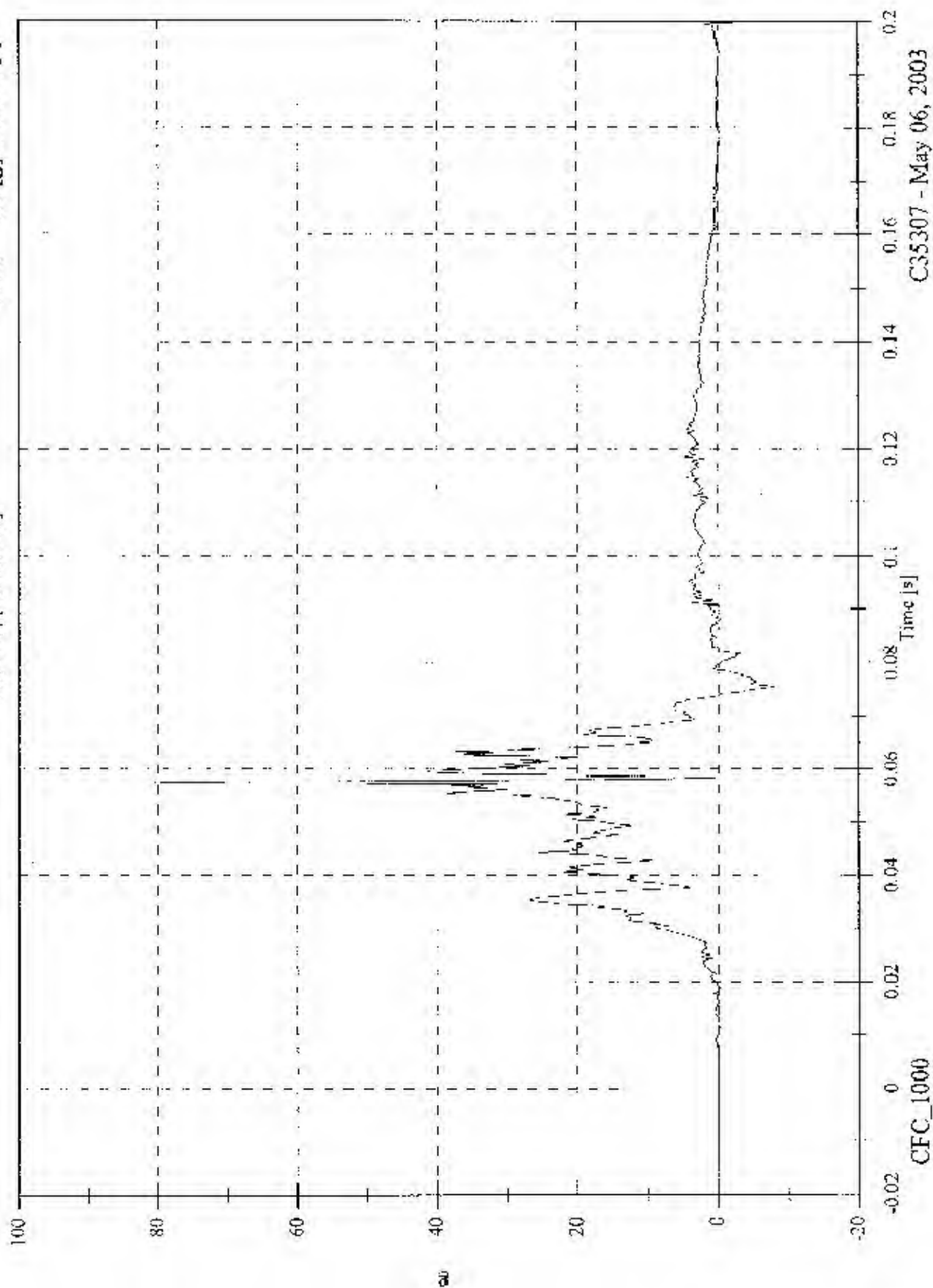


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V2P1 Upper Rib Ry

Max: 81.0 [g] at 0.057 [s]
Min: -8.0 [g] at 0.076 [s]

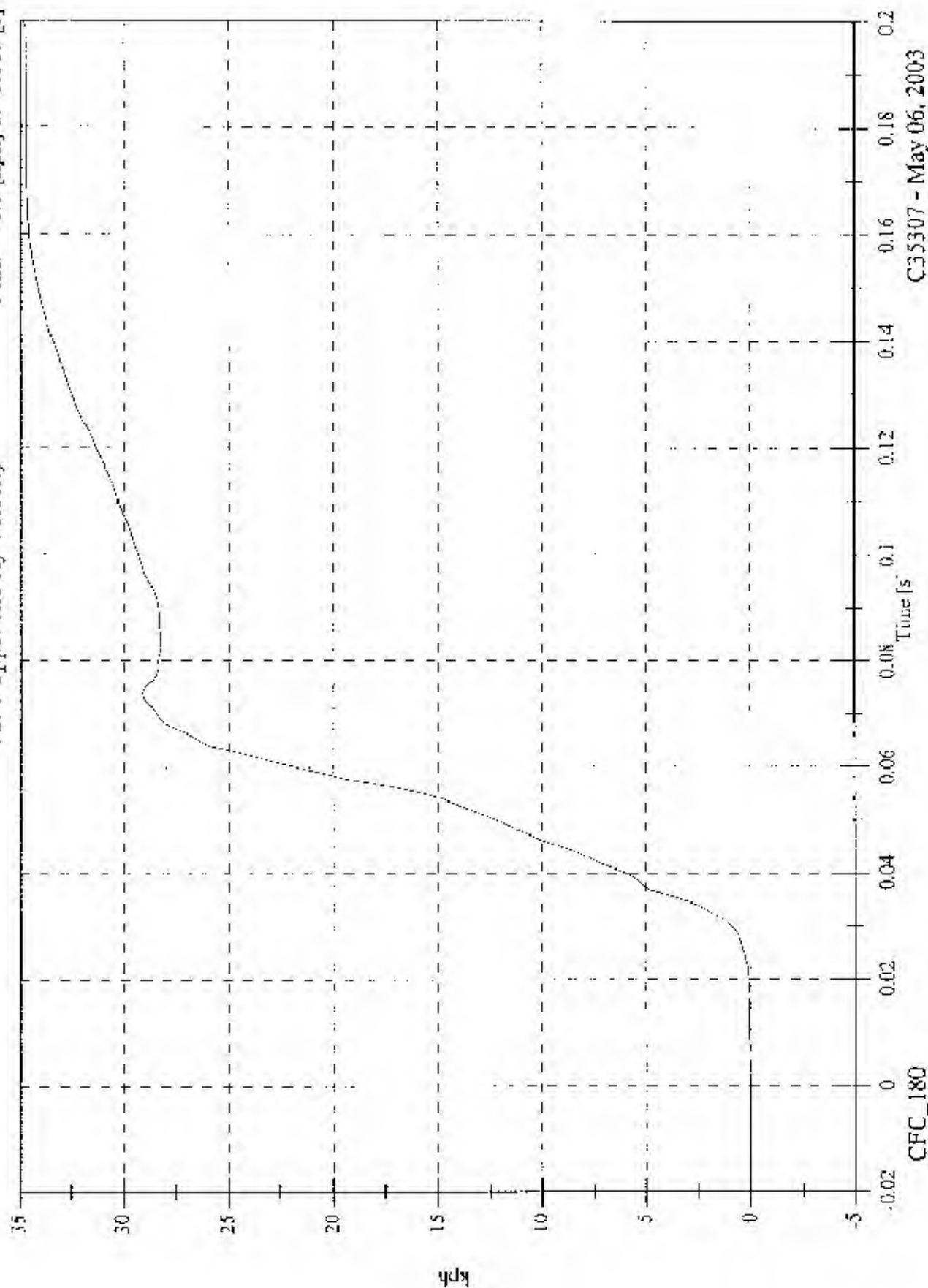


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V2P1 Upper Rib Ry Velocity

Max: 35.0 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.015 [s]

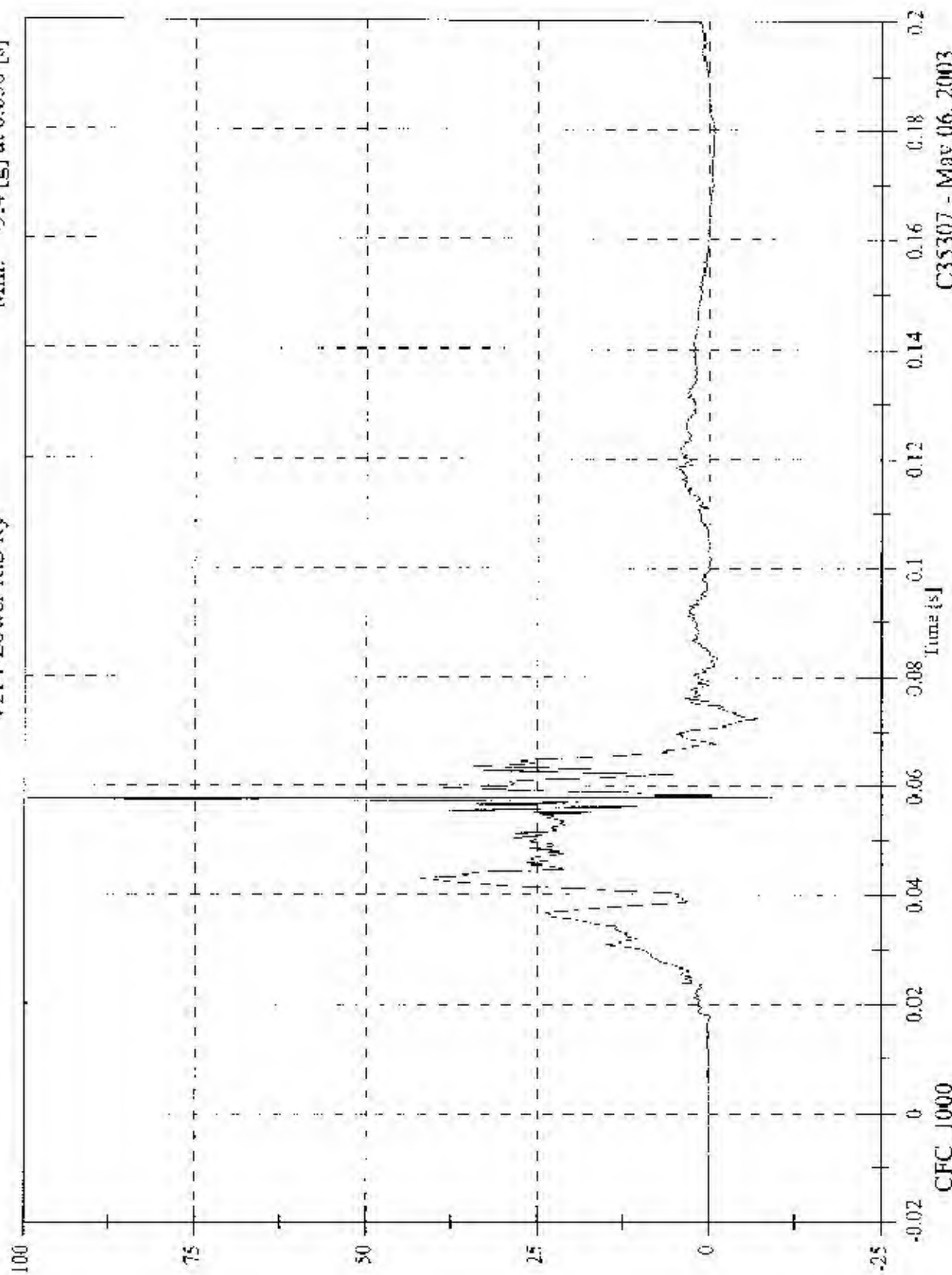


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V2PI Lower Rib Ry

Max: 99.5 [g] at 0.058 [s]
Min: -9.4 [g] at 0.058 [s]

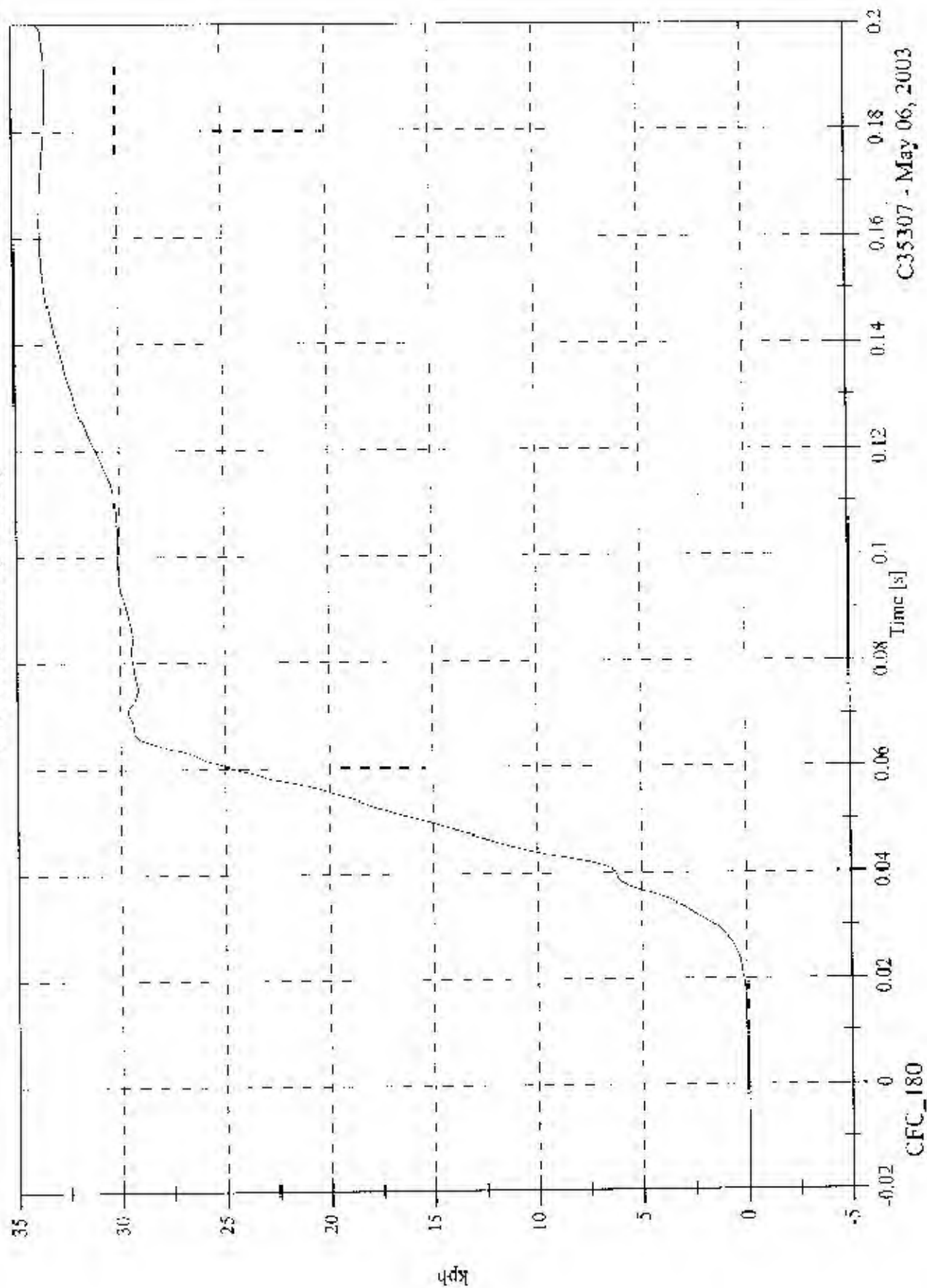


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Max: 33.9 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Rib Ry Velocity

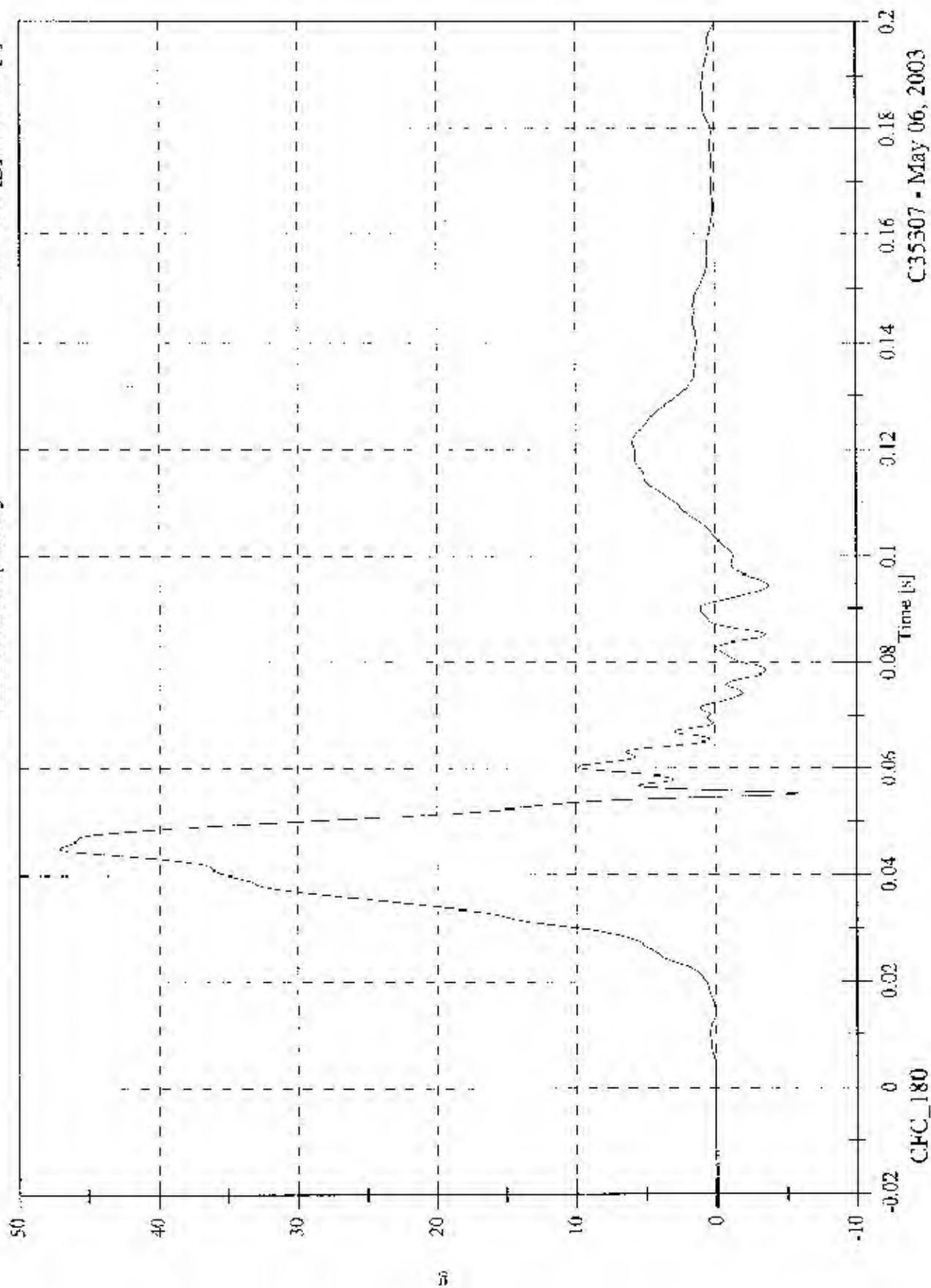


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V2P1 Lower Spine Ry

Max: 47.1 [g] at 0.045 [s]
Min: -6.0 [g] at 0.055 [s]

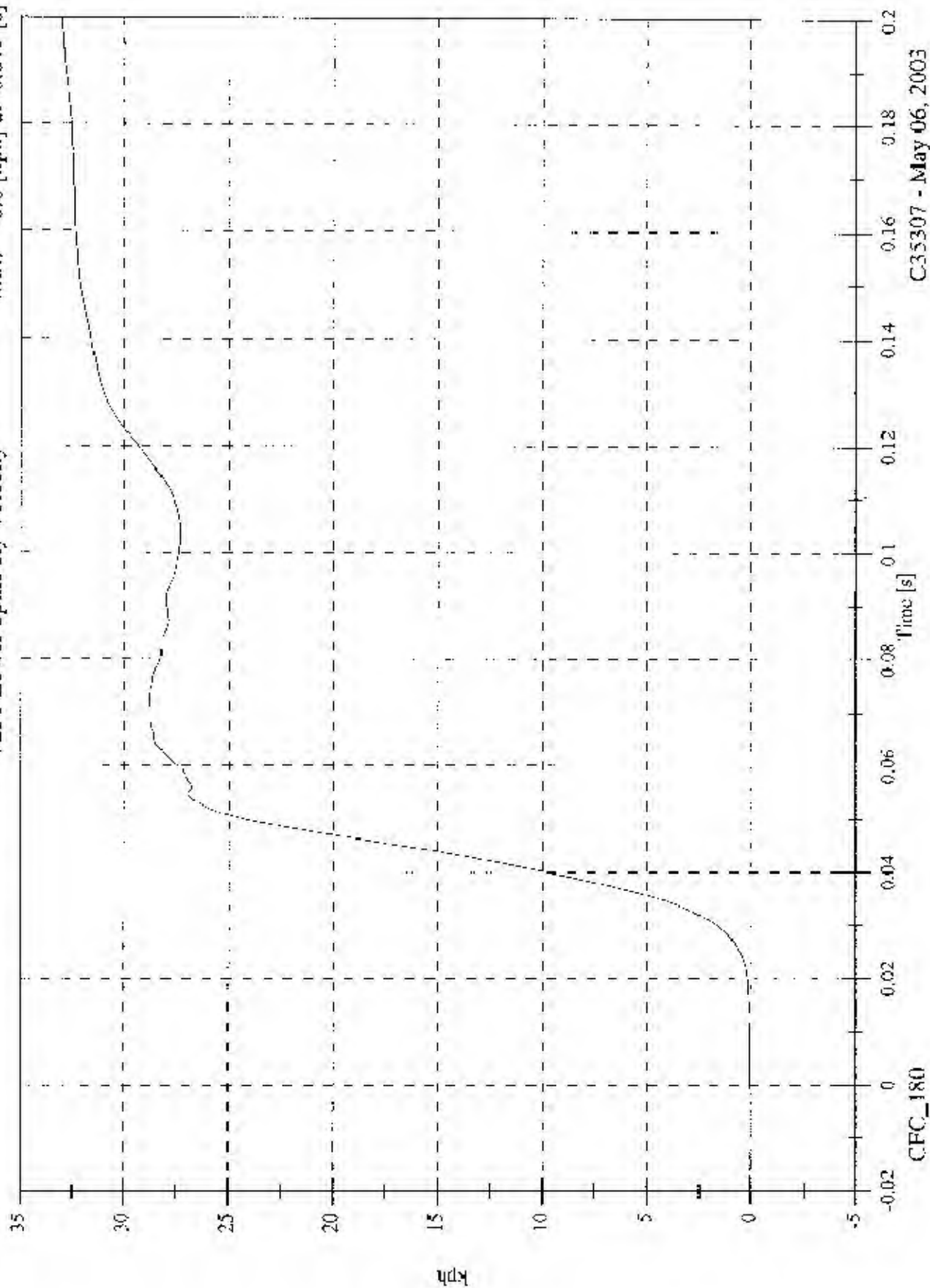


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Spine Ry Velocity

Max: 33.1 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.015 [s]

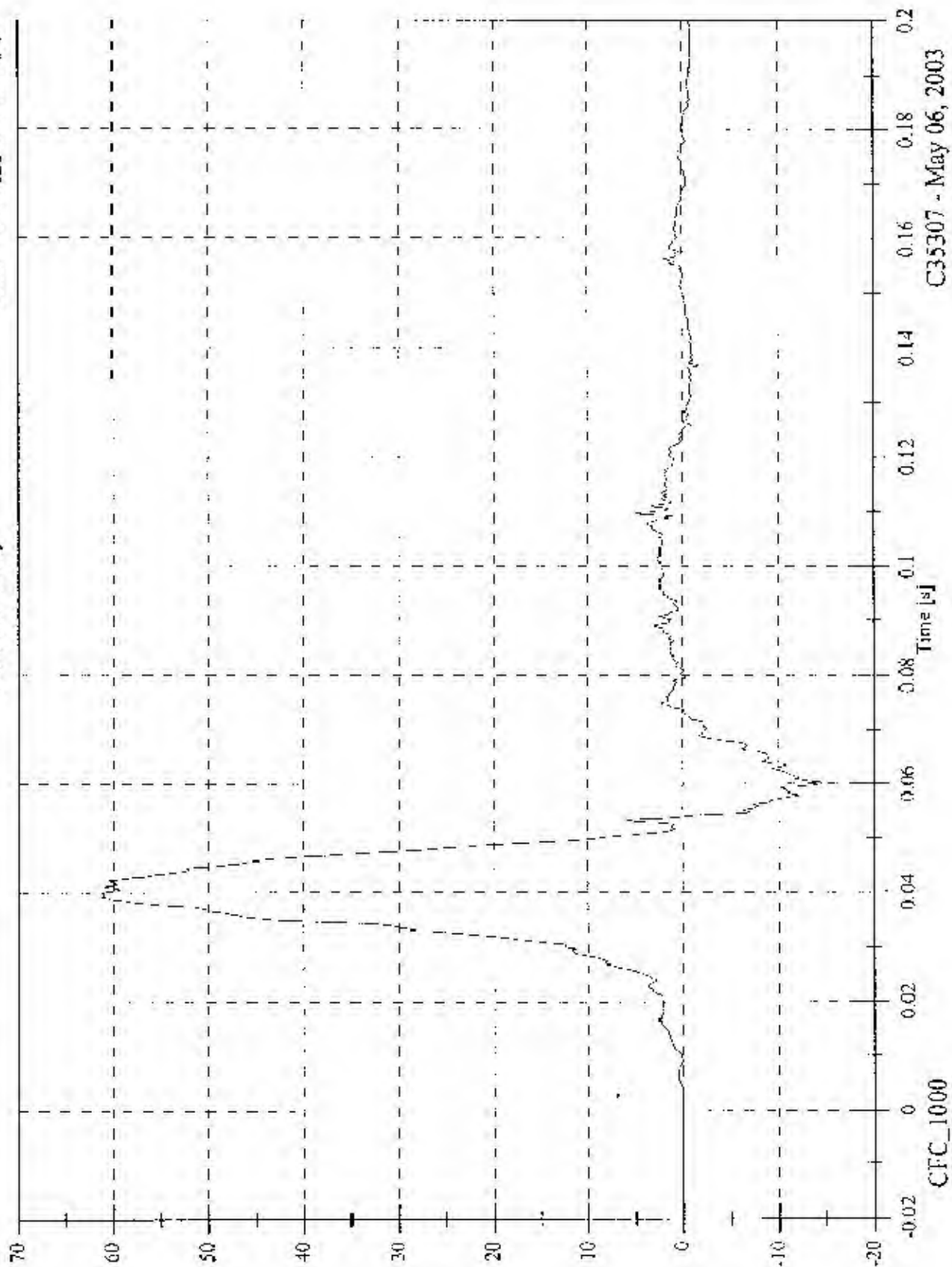


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Max: 61.2 [g] at 0.040 [s]
Min: -14.6 [g] at 0.060 [s]

V2P1 Pelvic Ry

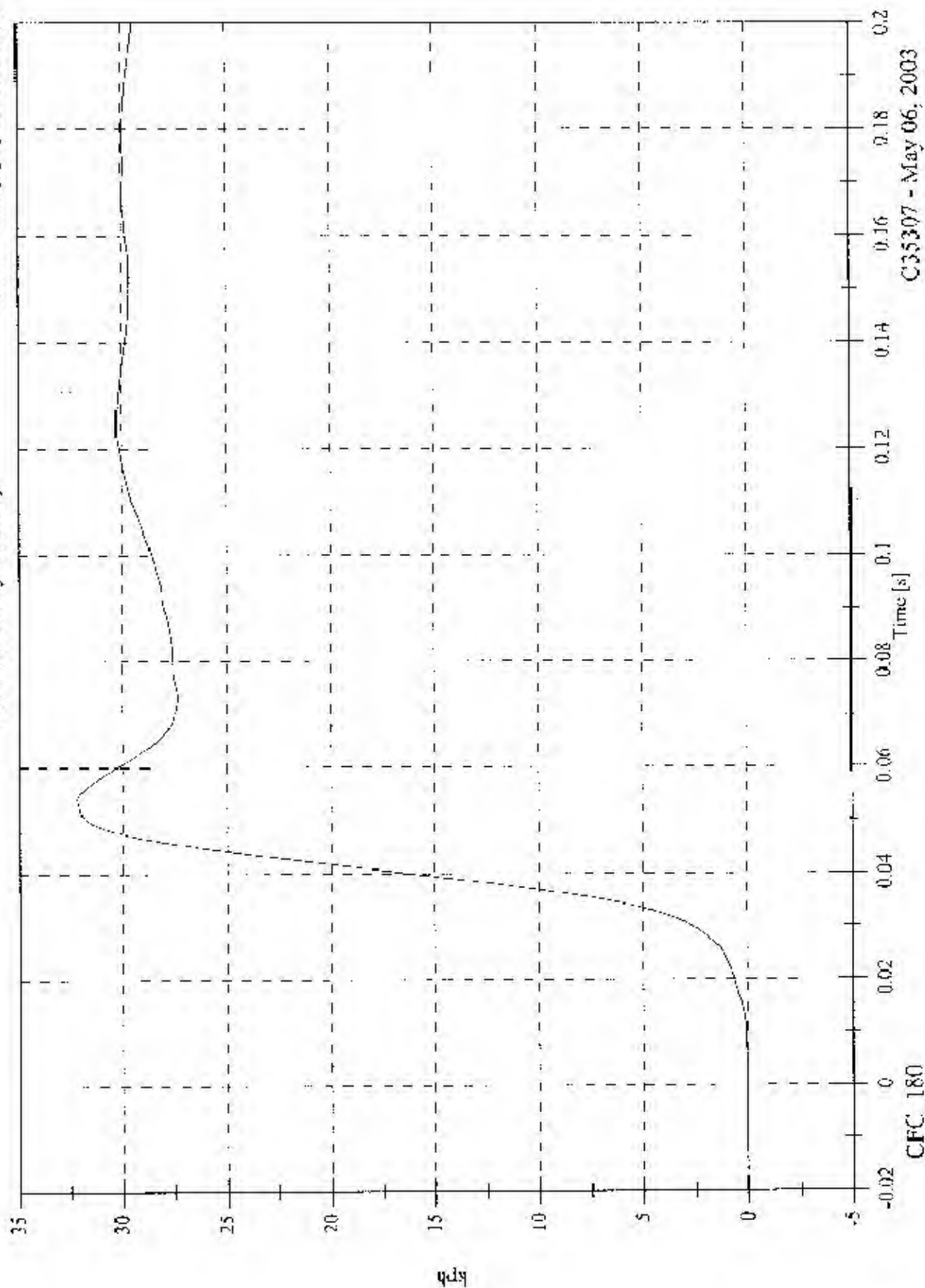


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Max: 32.2 [kph] at 0.054 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Pelvic Ry Velocity

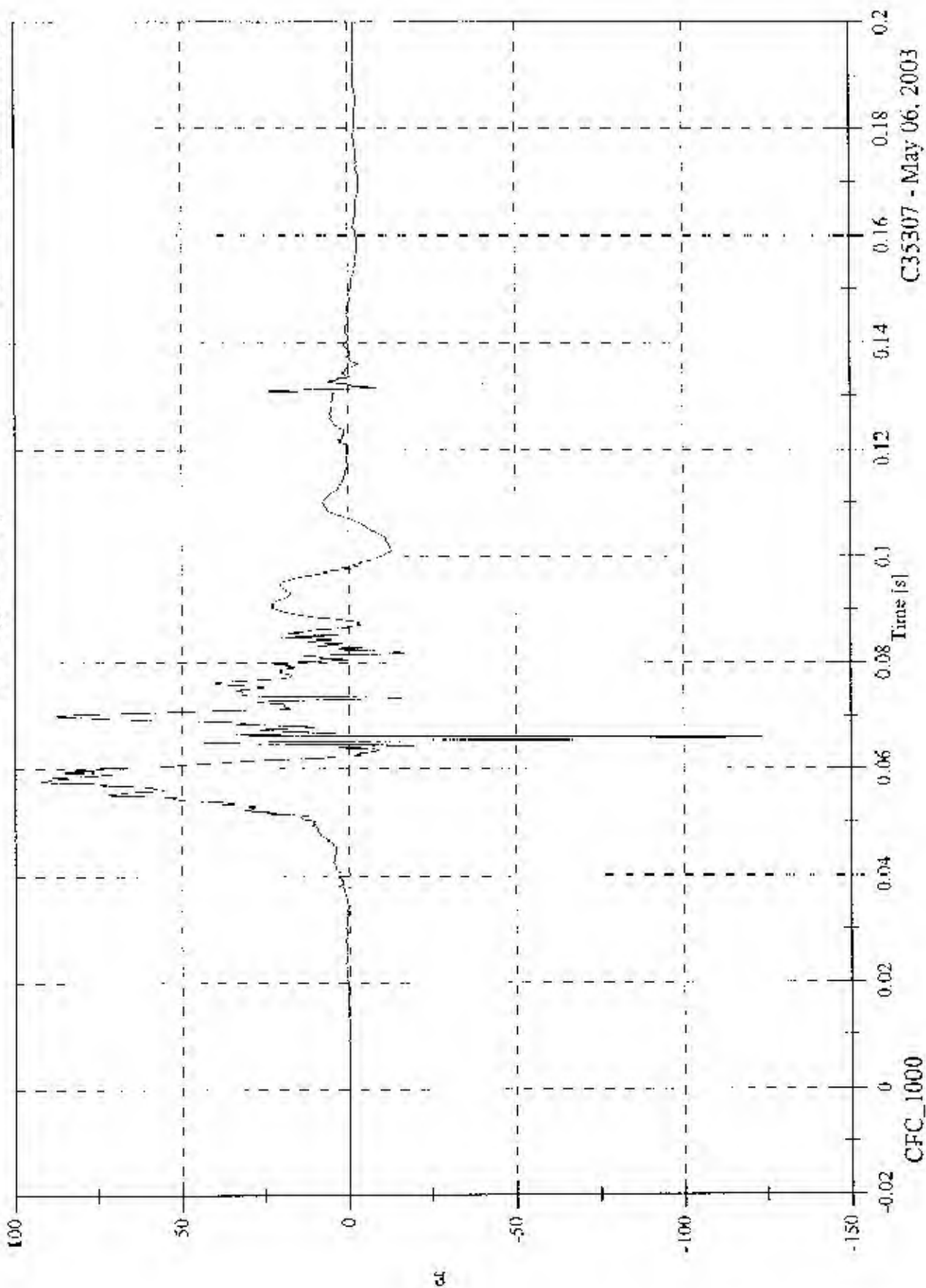


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V2P4 Upper Rib Ry

Max: 92.5 [g] at 0.058 [s]
Min: -123.8 [g] at 0.066 [s]

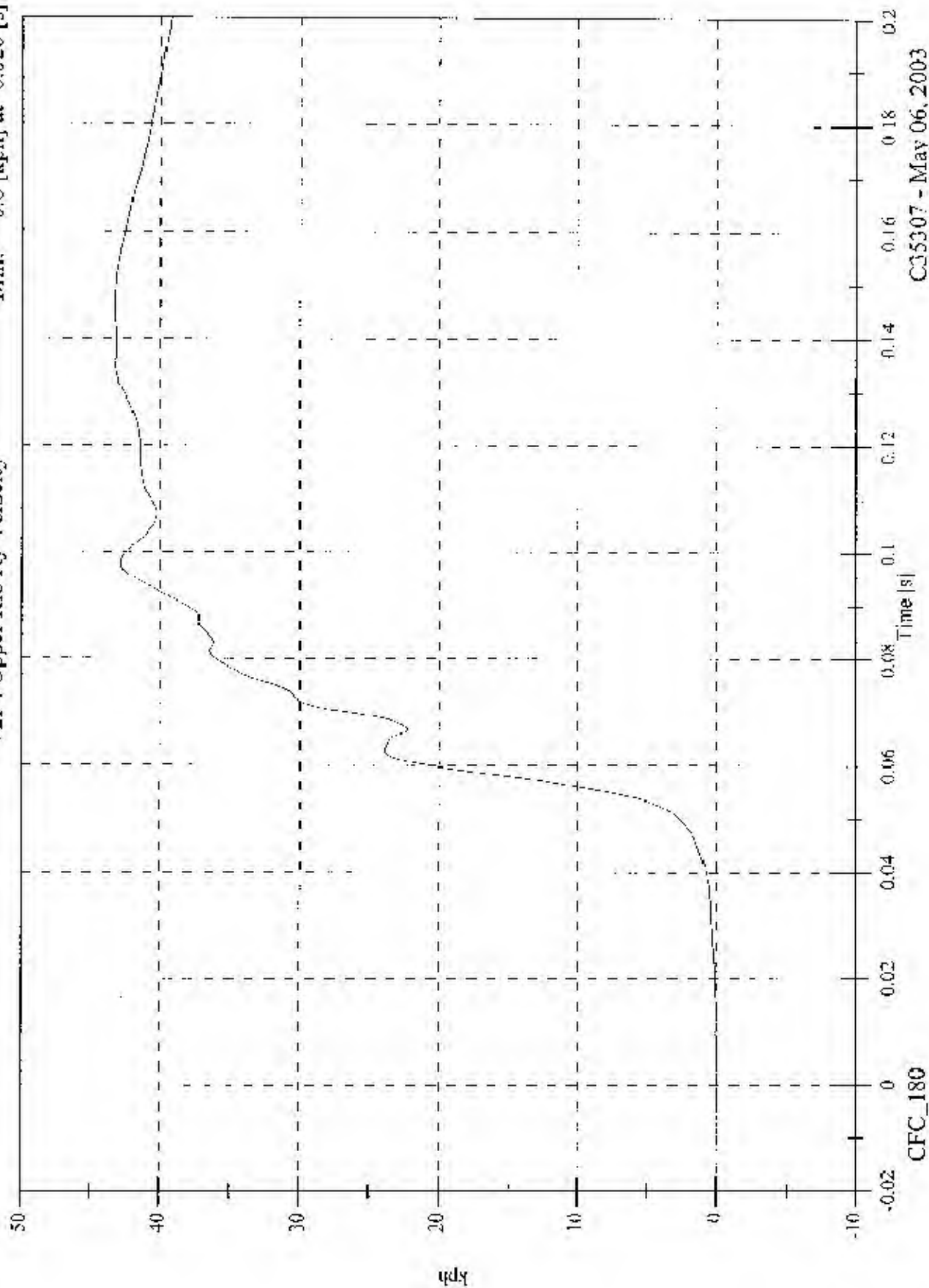


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V2P4 Upper Rib Ry Velocity

Max: 43.3 [kph] at 0.147 [s]
Min: -0.0 [kph] at -0.020 [s]



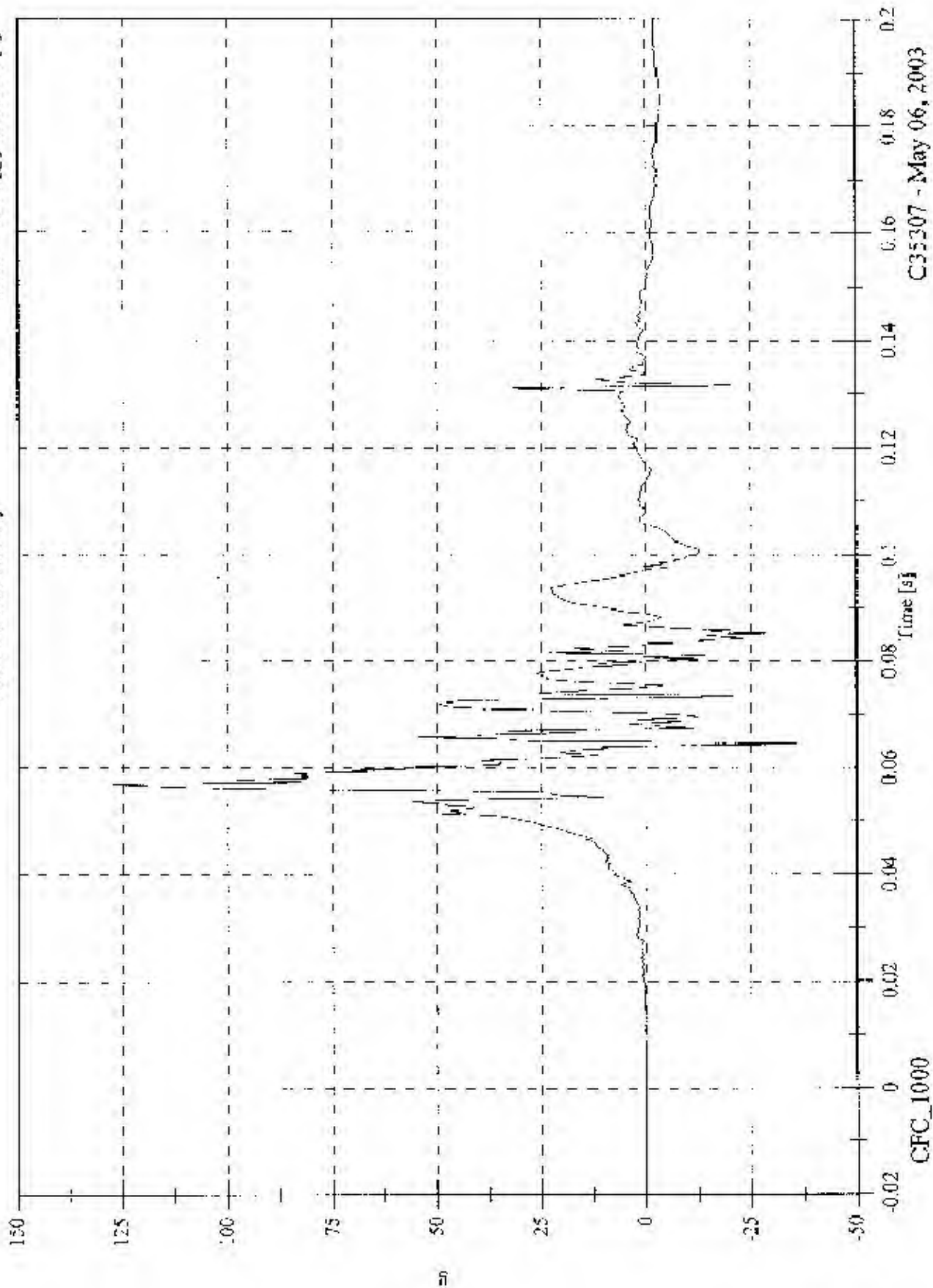
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Max: 127.4 [g] at 0.057 [s]

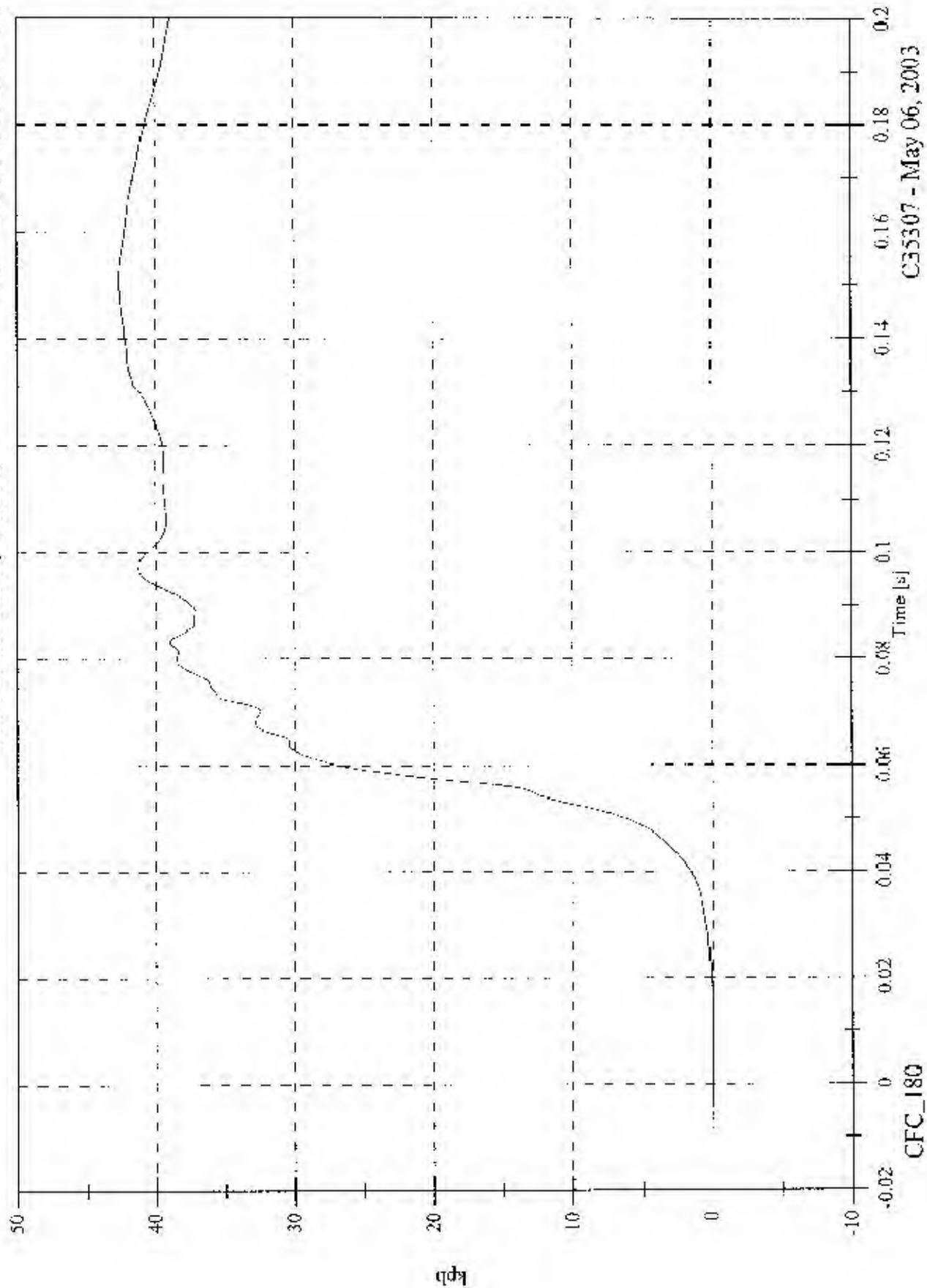
Min: -35.4 [g] at 0.064 [s]

V2P4 Lower Rib Ry



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V2P4 Lower Rib Ry Velocity

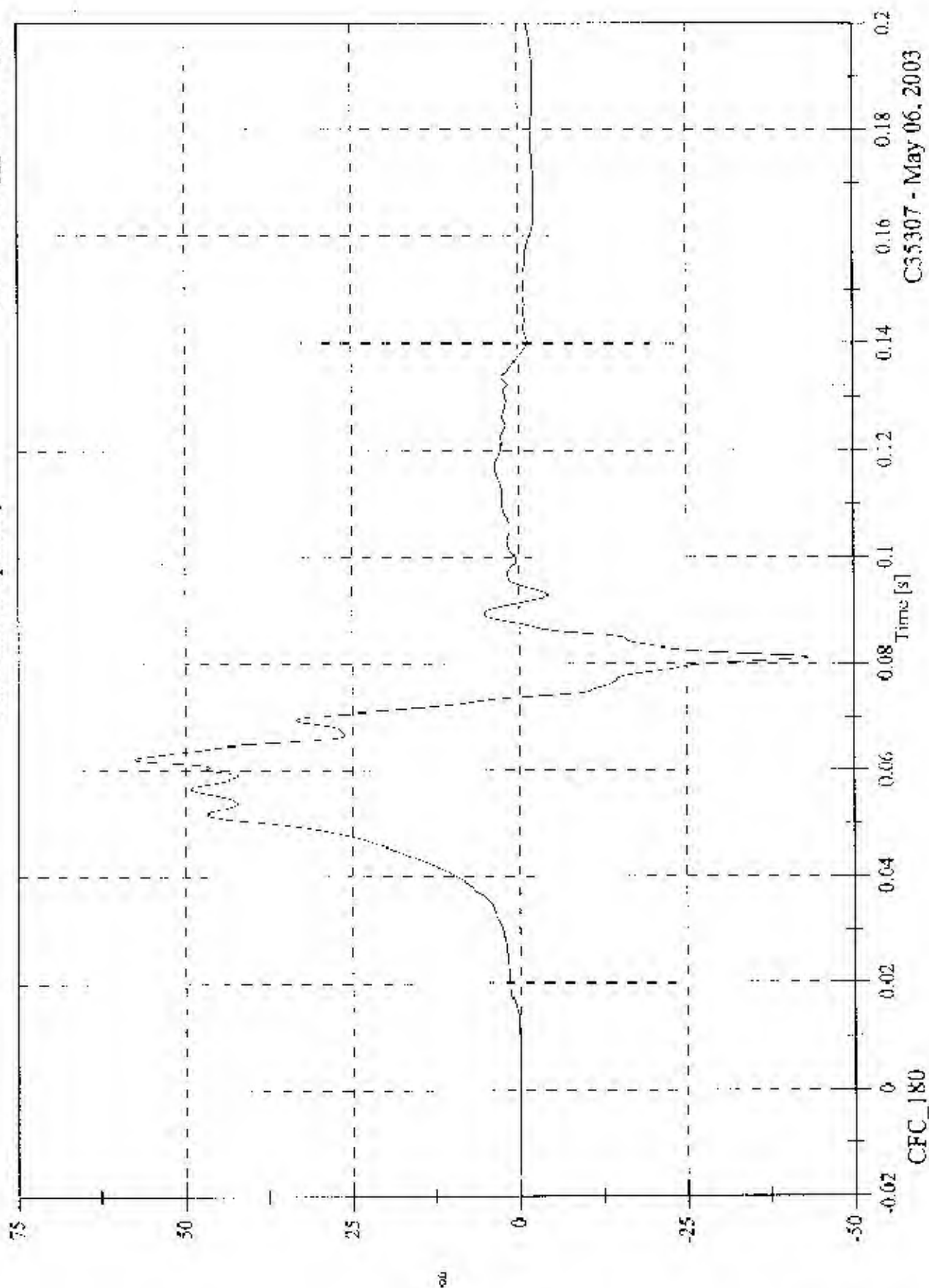


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2003 FNV/SS 214D Test 8 2003 Honda Element

Max: 57.5 [g] at 0.062 [s]
Min: -43.3 [g] at 0.081 [s]

V2P4 Lower Spine Ry

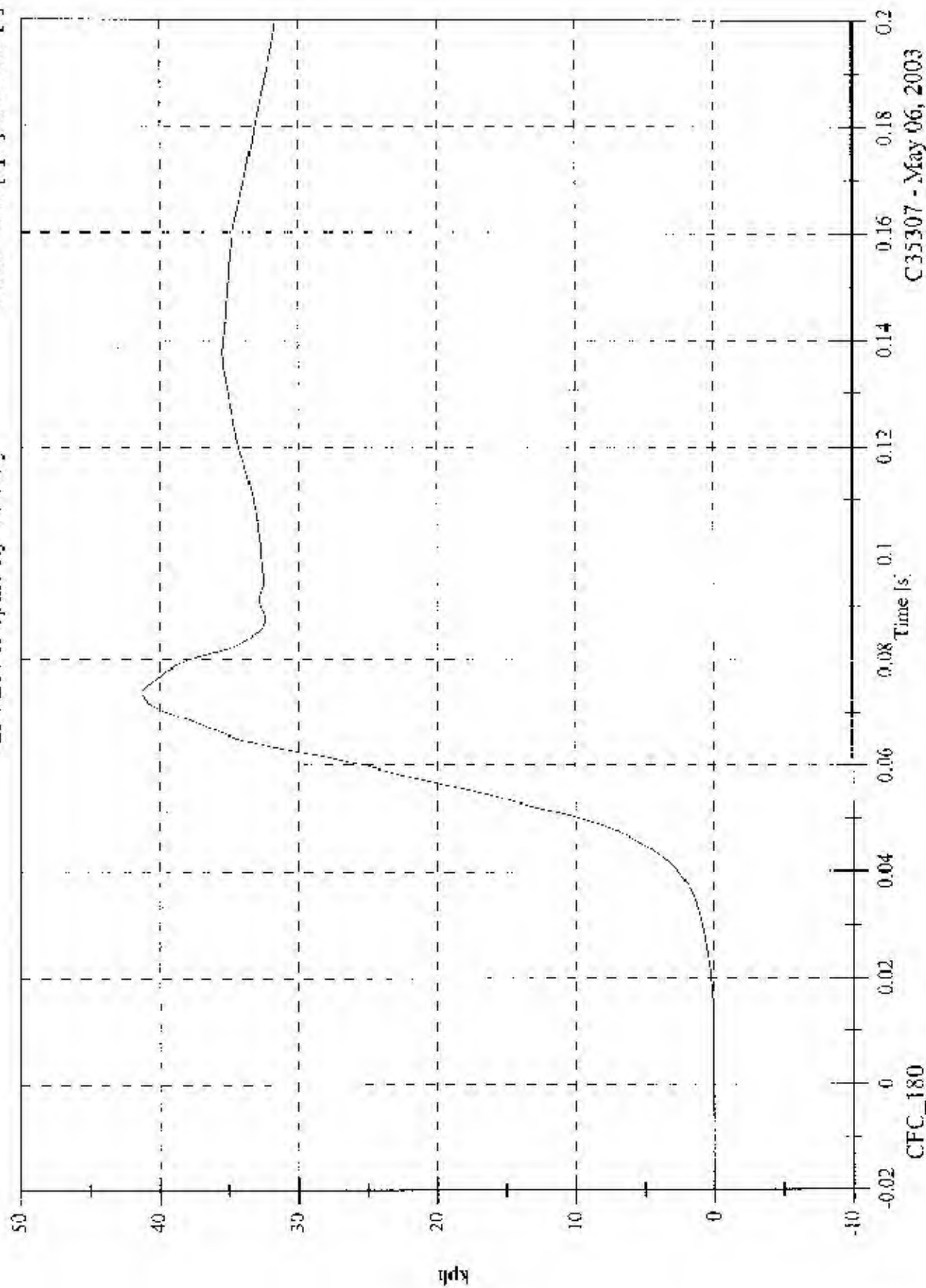


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V2P4 Lower Spine Ry Velocity

Max: 41.2 [kph] at 0.074 [s]
Min: -0.0 [kph] at -0.008 [s]

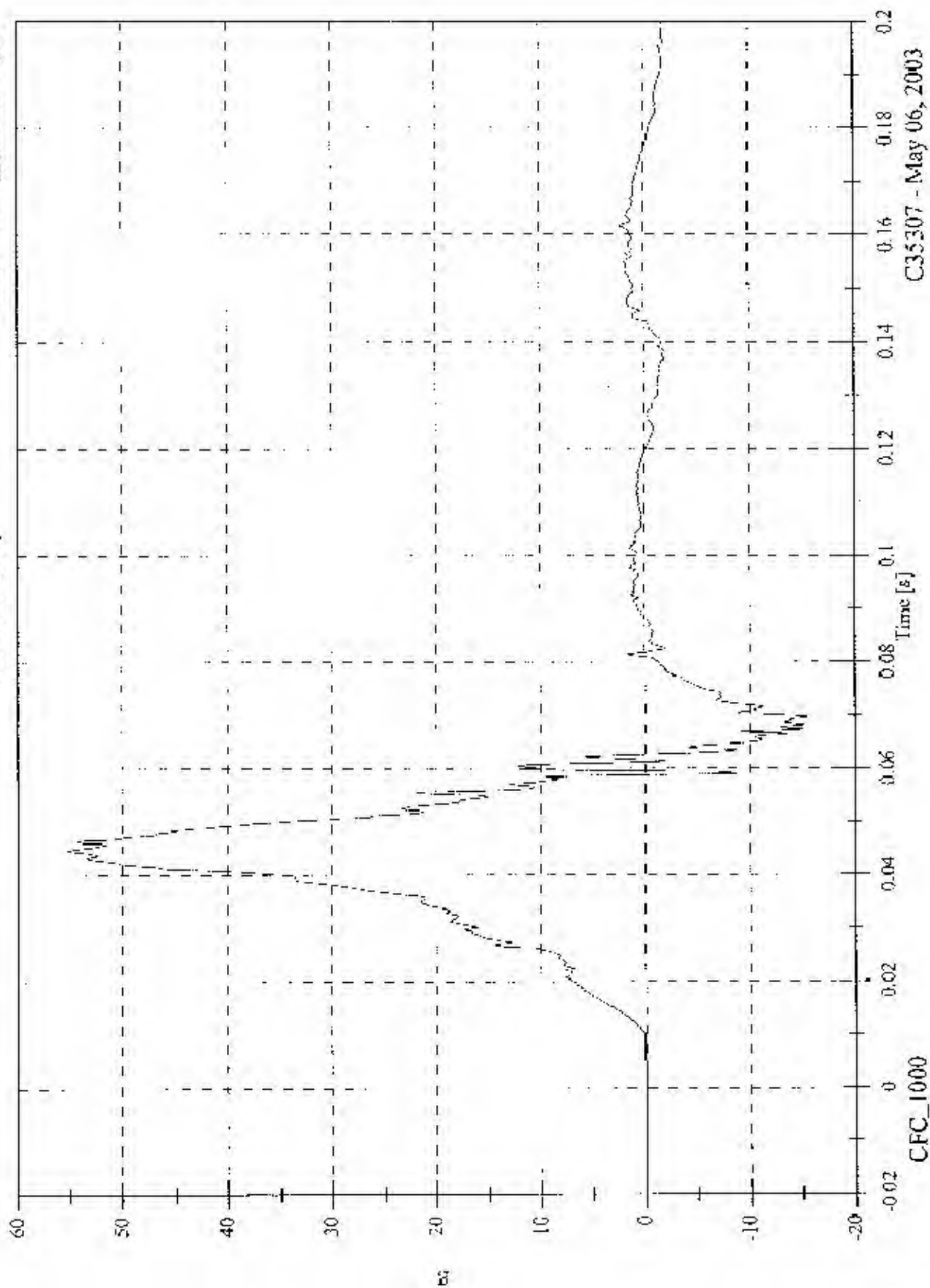


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V2P4 Pelvic Ry

Max: 55.2 [g] at 0.045 [s]
Min: -15.7 [g] at 0.070 [s]

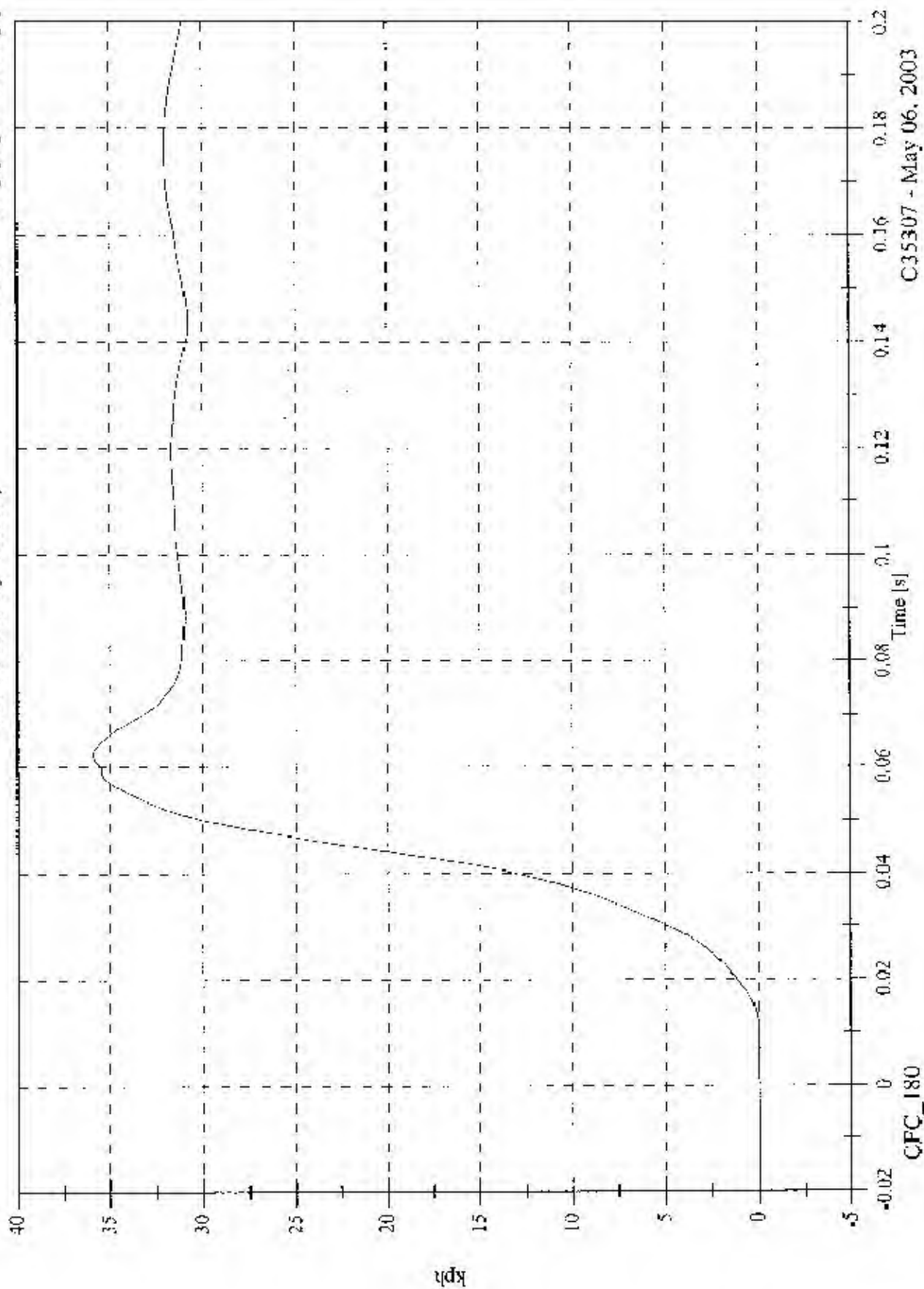


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Pelvic Ry Velocity

Max: 35.9 [kph] at 0.062 [s]
Min: -0.0 [kph] at -0.018 [s]

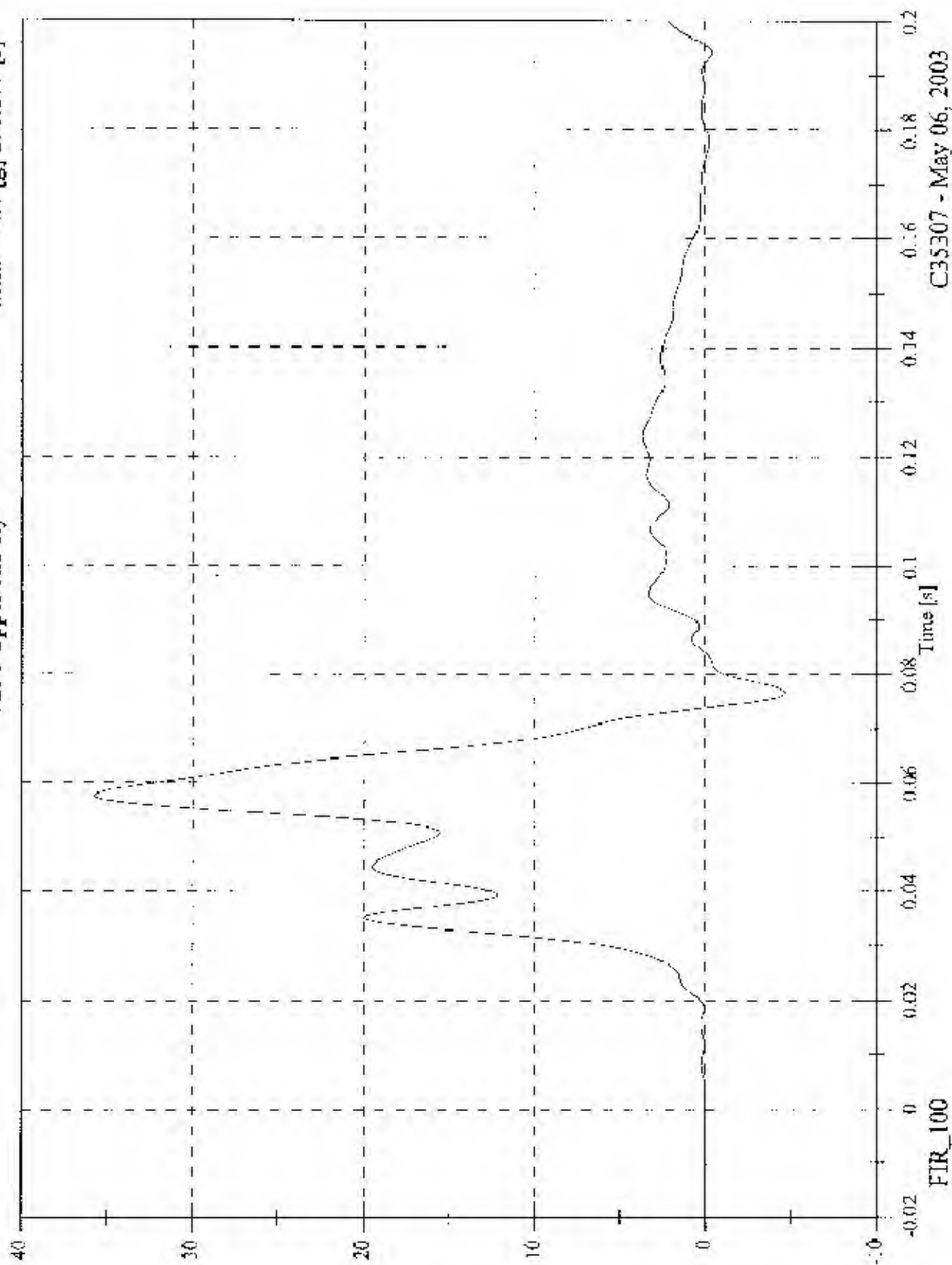


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Upper Rib Ry

Max: 35.8 [g] at 0.057 [s]
Min: -4.7 [g] at 0.077 [s]

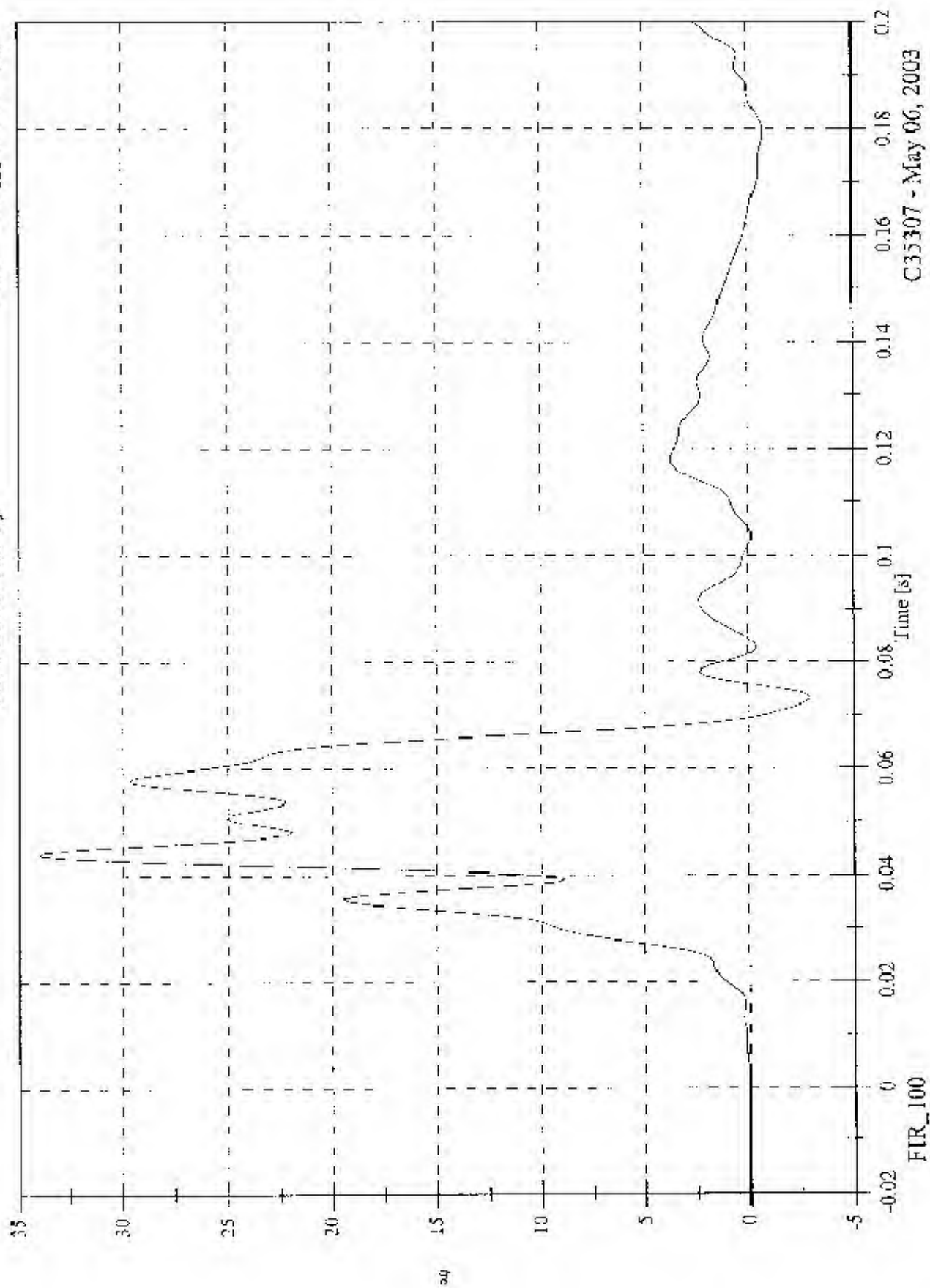


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Rib Ry

Max: 34.0 [g] at 0.044 [s]
Min: -3.0 [g] at 0.073 [s]

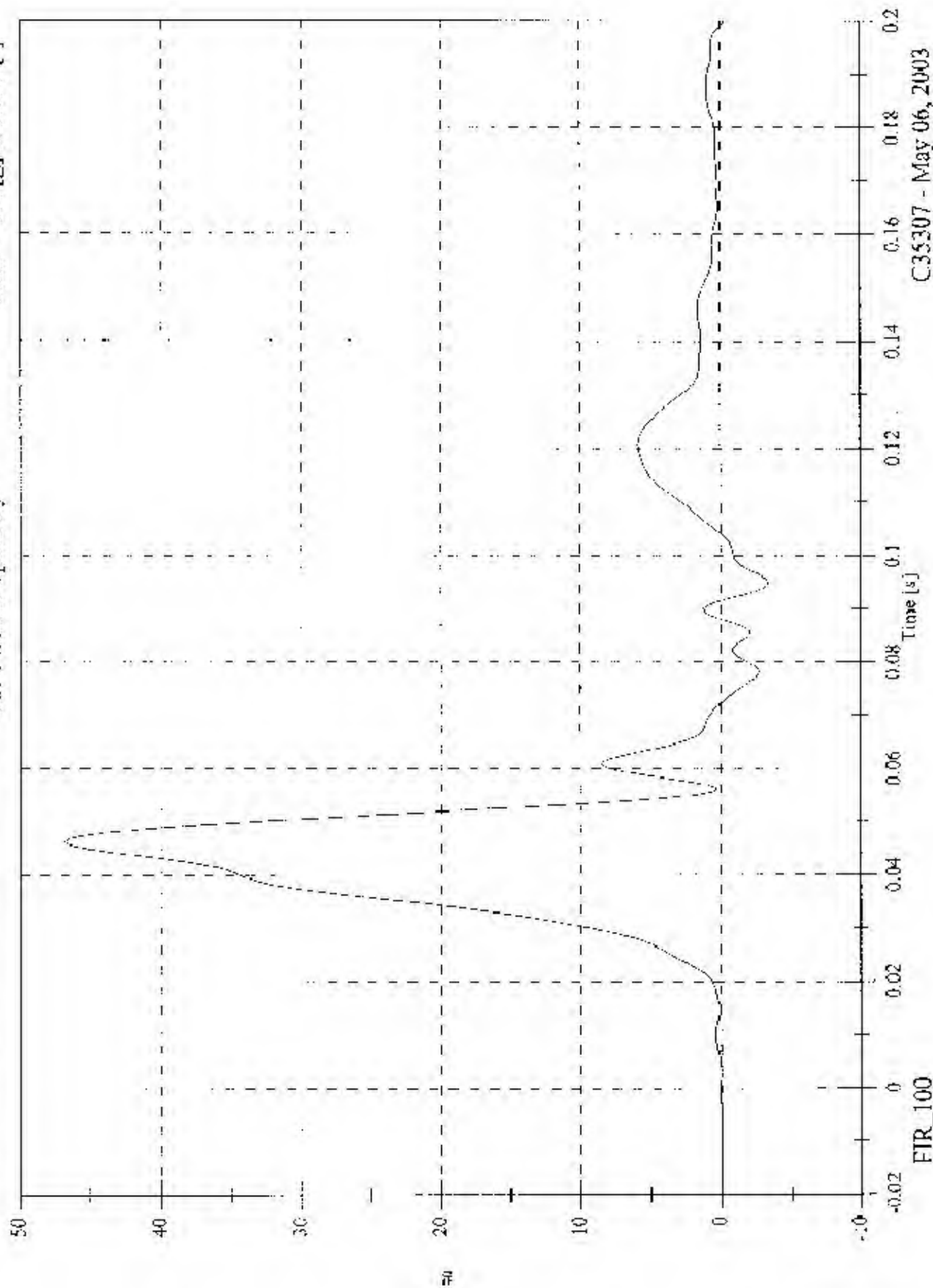


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 46.8 [g] at 0.046 [s]
 Min: -3.4 [g] at 0.095 [s]

V2P | Lower Spine Ry

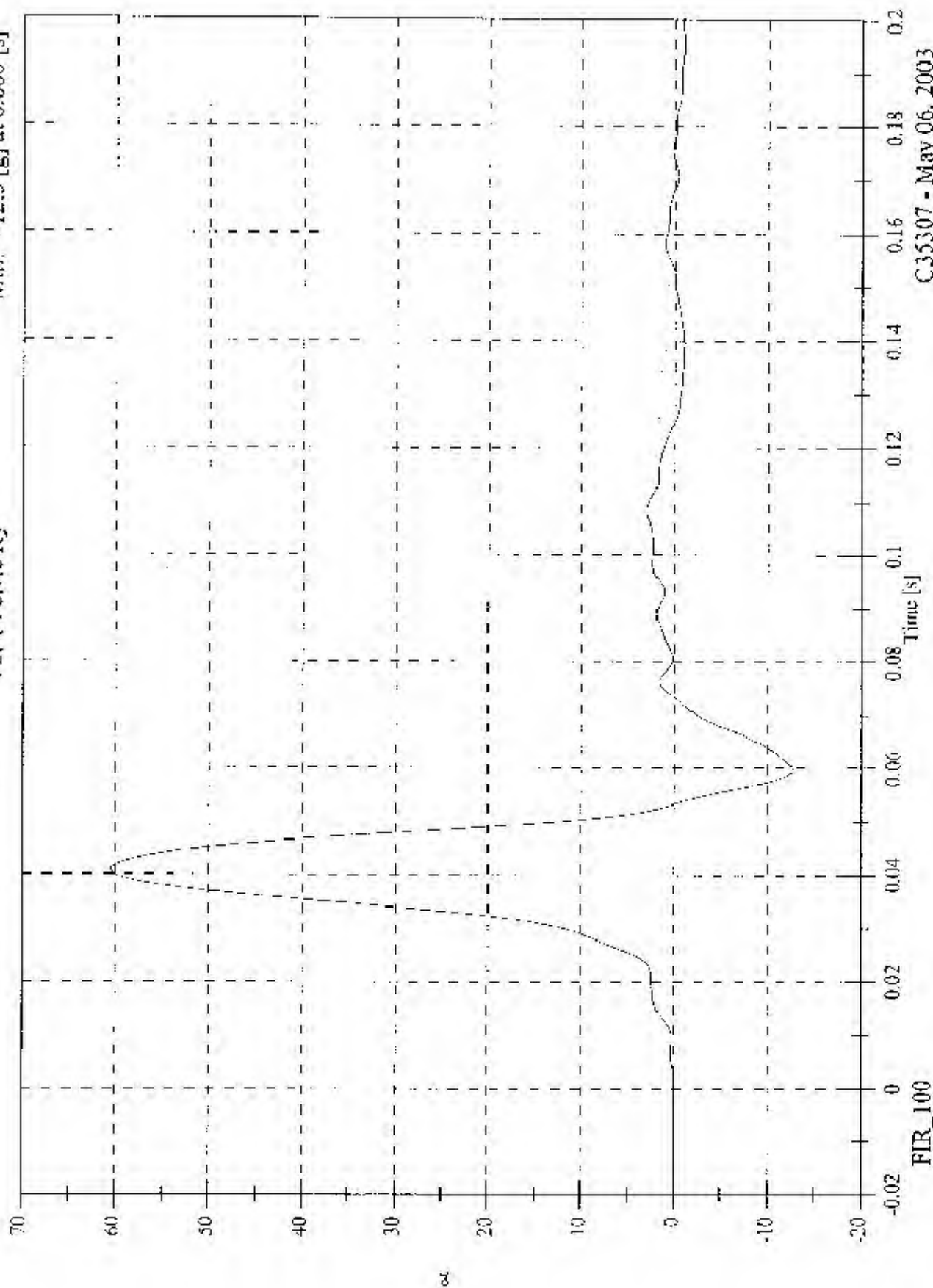


C355307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2PI Pelvic Ry

Max: 60.4 [g] at 0.041 [s]
Min: -12.5 [g] at 0.060 [s]

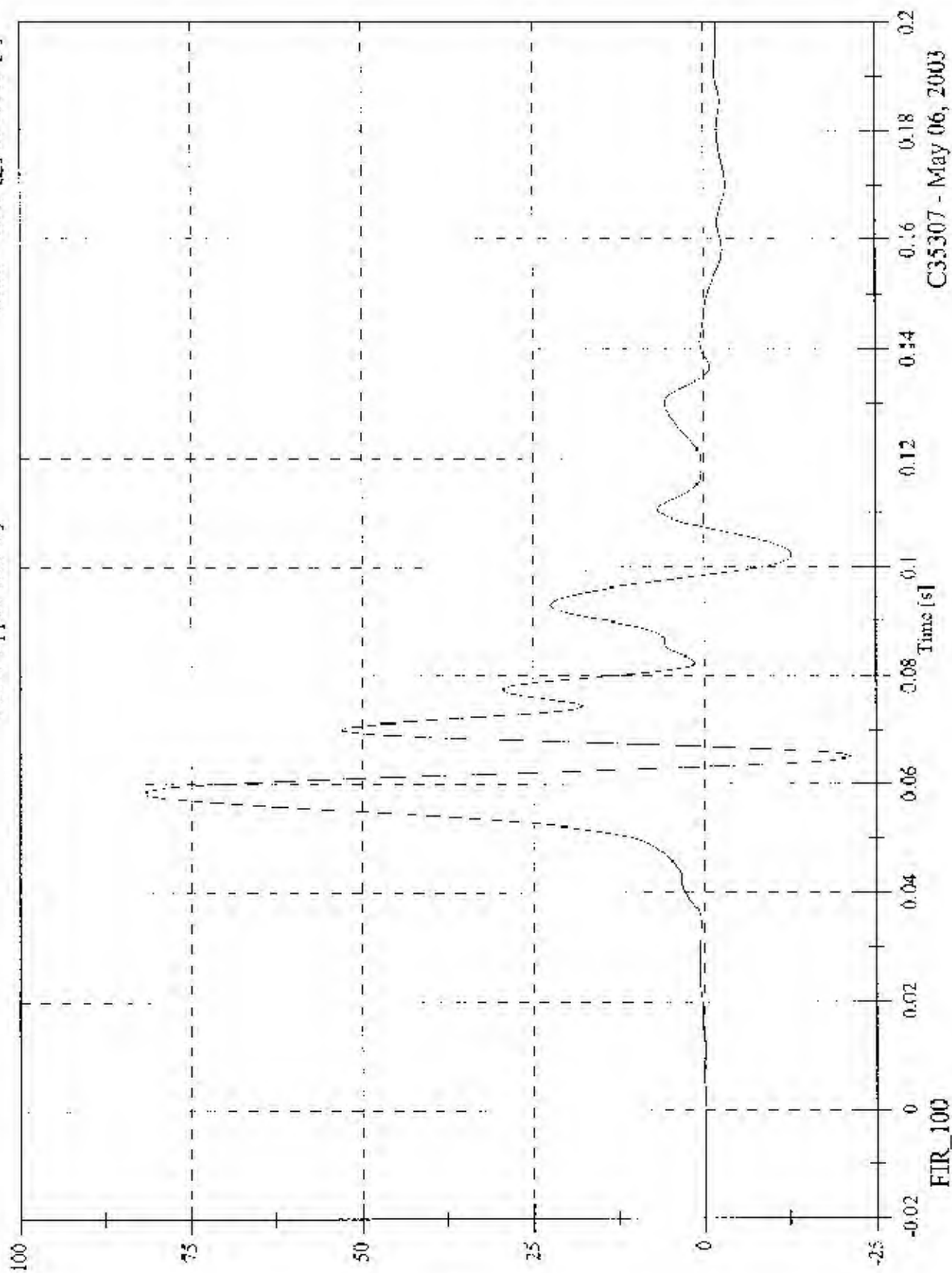


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Rib Ry

Max: 81.5 [g] at 0.059 [s]
Min: -21.5 [g] at 0.065 [s]

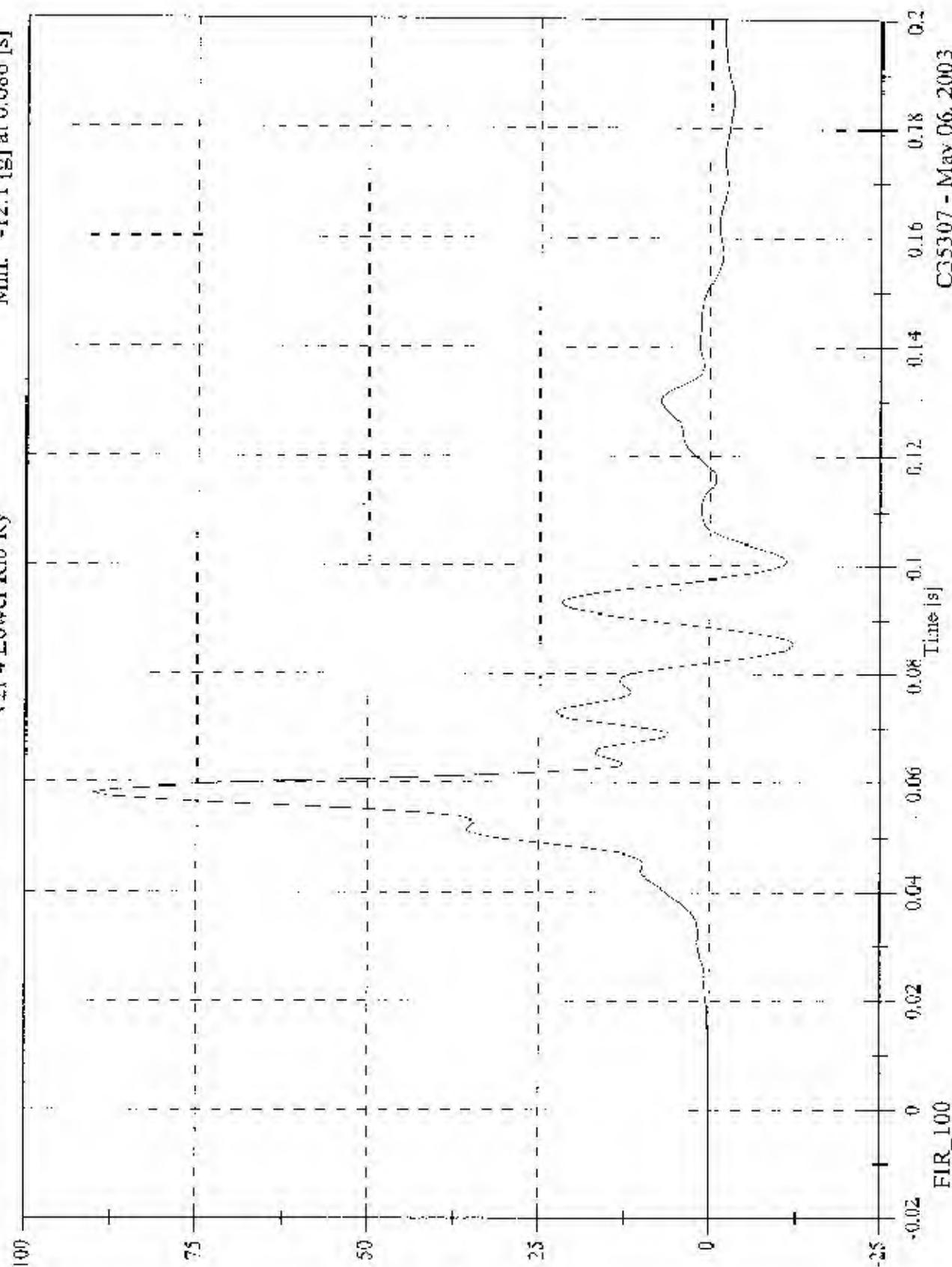


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 90.3 [g] at 0.058 [s]
 Min: -12.1 [g] at 0.086 [s]

V2P4 Lower Rib Ry



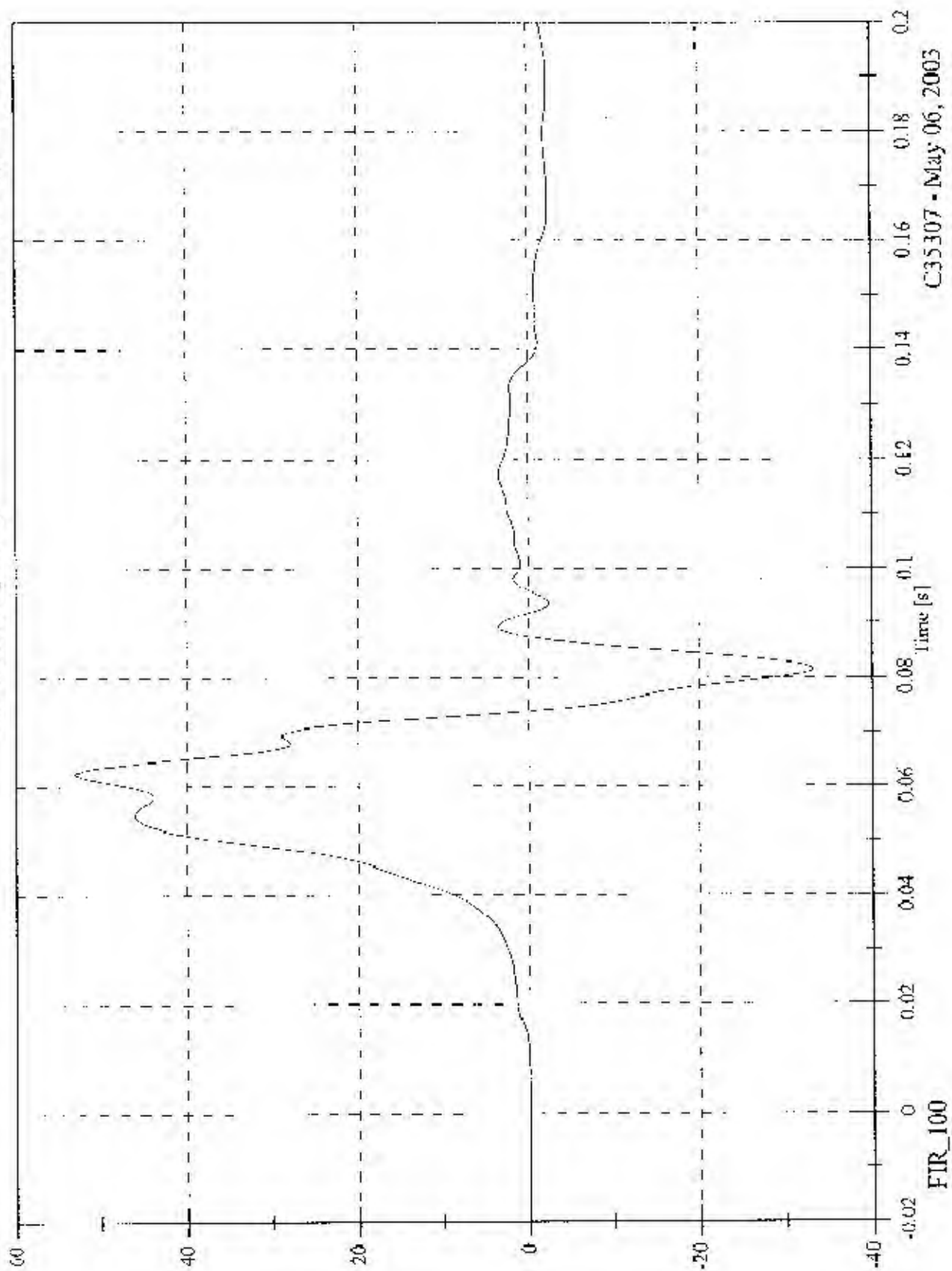
C25307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 53.0 [g] at 0.062 [s]

Min: -33.1 [g] at 0.081 [s]

V2P4 Lower Spine Ry

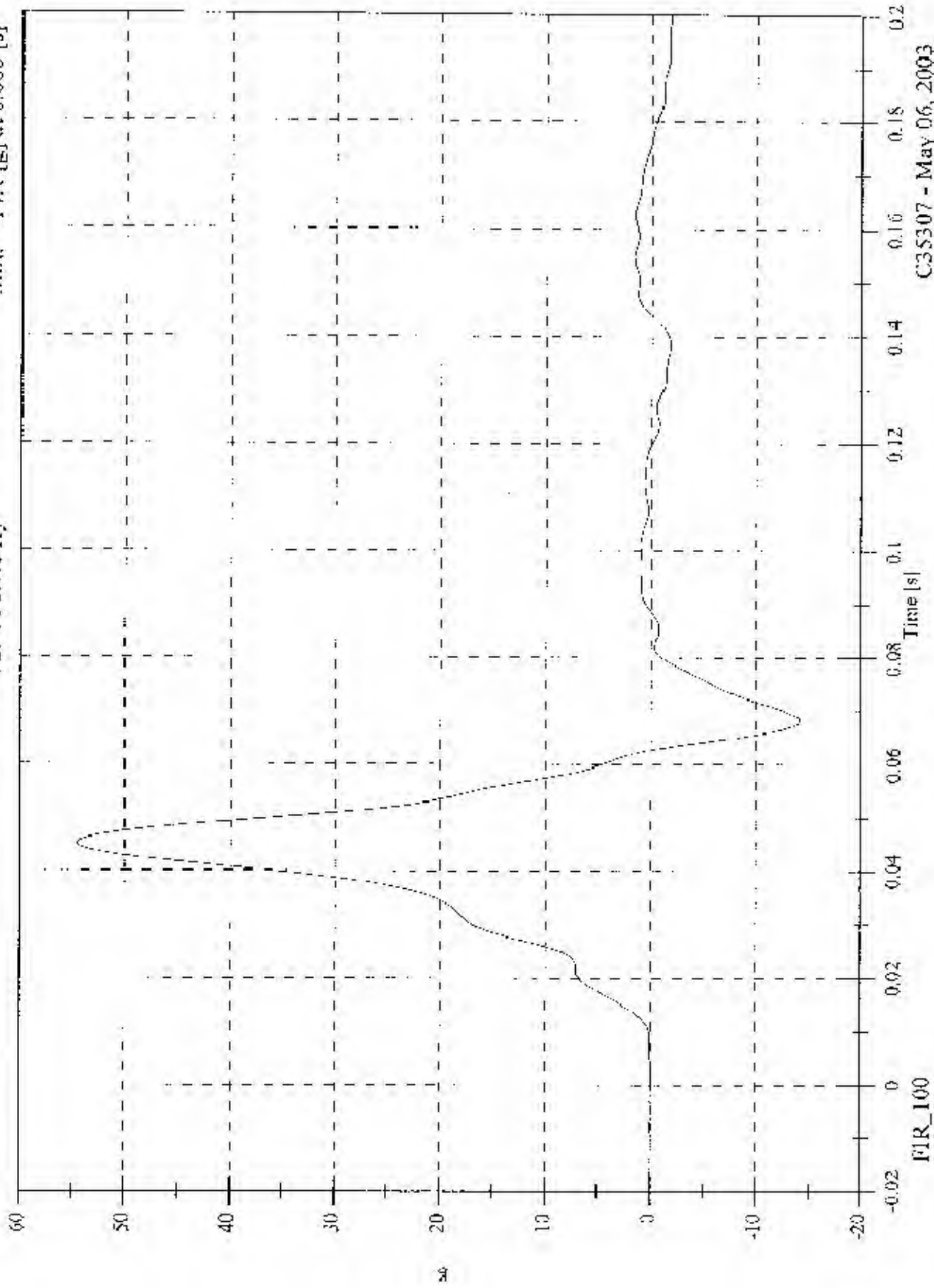


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 54.5 [g] at 0.045 [s]
 Min: -14.1 [g] at 0.068 [s]

V2P4 Pelvic Ry



APPENDIX C

SID HYBRID III CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID H3 PRE & POST TEST CALIBRATION
CONFIGURED FOR LEFT SIDE IMPACT

Date: May 2, 2003; May 9, 2003

Sequential Test Number:

2, 3

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID H3 015 NO.:		SID H3 016 NO.:	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	902	902	902	902
RH- Rib Height (mm)	501 - 521	511	511	513	513
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	239	239	239	239
KV- Knee Pivot from Back Line (mm)	511 - 526	521	521	521	521
SW- Knee Pivot to Floor (mm)	490 - 505	495	495	495	495
HW- Hip Width (mm)	356 - 391	371	371	371	371
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	37	38	37	38
PROBE SPEED (m/s)	4.27 - 4.33	4.3	4.27	4.29	4.28
UPPER RIB (g's)	37 - 46	38.69	37.43	42.97	43.28
LOWER RIB (g's)	37 - 46	38.27	38.17	40.28	38.62
LOWER SPINE (g's)	15 - 22	19.6	18.55	21.81	21.2
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	37	38	37	38
PROBE SPEED (m/s)	4.27 - 4.33	4.31	4.28	4.27	4.27
PELVIS (g's)	40 - 60	44.61	43.89	42.12	42.12

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

STD H3 NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date:

May 2, 2003

Laboratory Technician:

B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

THORACIC SHOCK ABSORBER TESTS PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
Date: April 24, 2003 Laboratory Technician: B. Swieczki

DAMPER IDENTIFICATION: _____

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	35.0
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	997.8
	DISPLACEMENT (mm)	30 - 35	32.2
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1909.2
	DISPLACEMENT (mm)	32 - 37	35.0
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4336.4
	DISPLACEMENT (mm)	33 - 40	37.9

DAMPER SETTING: 5 _____

REMARKS: None

Shock Test - Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date: 04-24-03

Serial No: 015

Work File: 015SI.04-23-03

TEST RESULTS

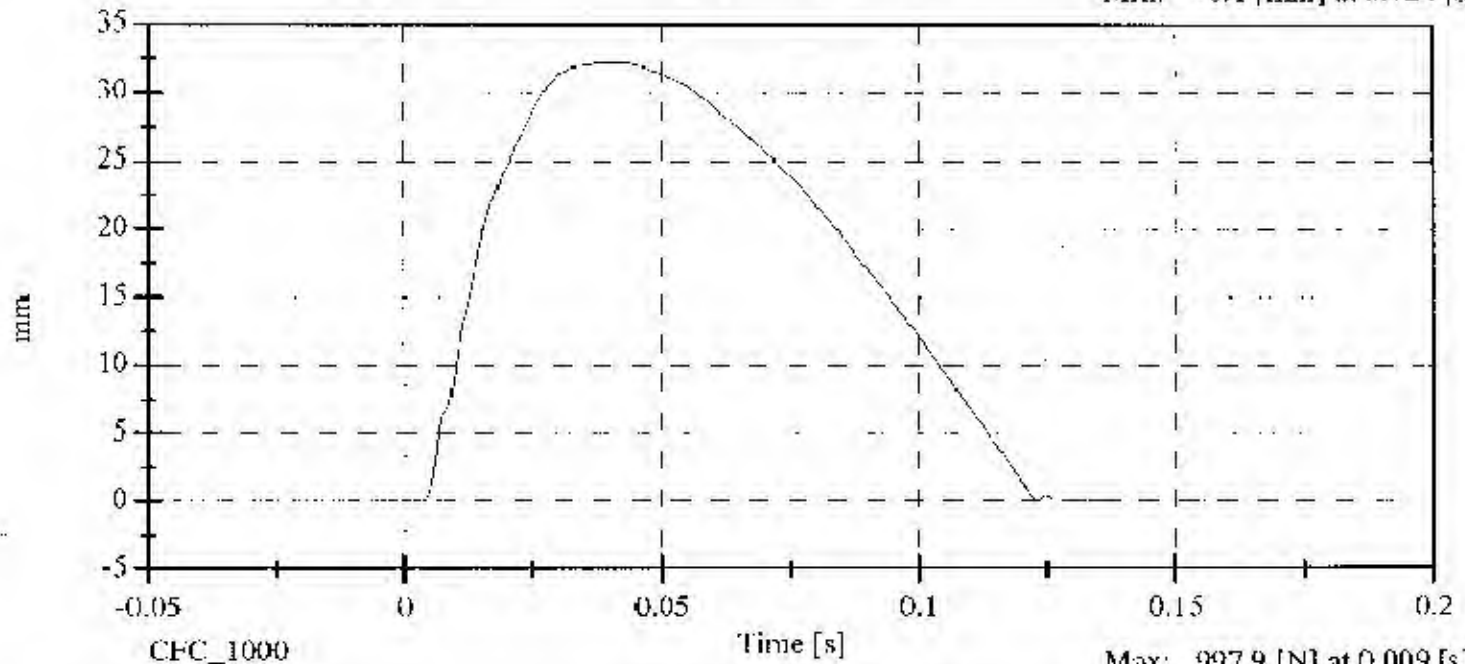
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Displacement:	30.00-35.00 mm	32.18 mm	Passed
Maximum Force:	836.00-1125.00 N	997.85 N	Passed

Shock Test - Low

Displacement vs. Time

Max: 32.2 [mm] at 0.041 [s]

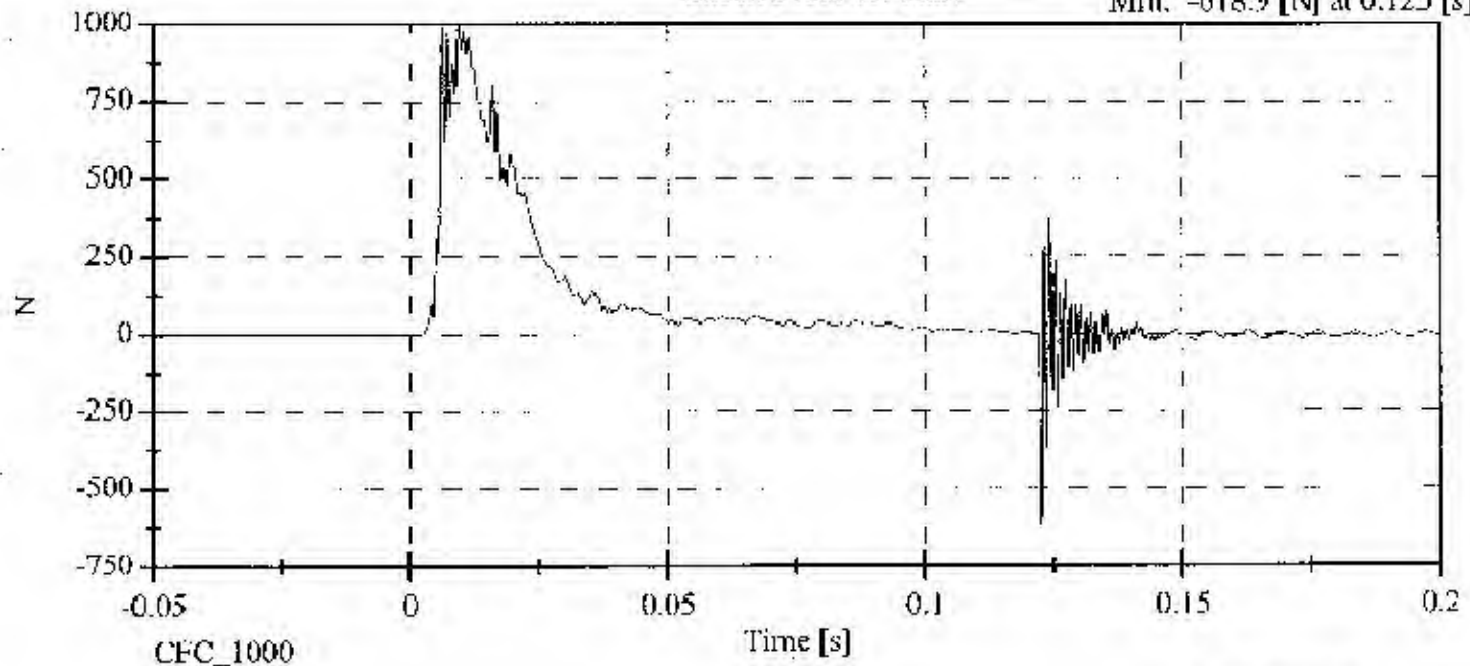
Min: -0.1 [mm] at 0.124 [s]



Shock Force vs. Time

Max: 997.9 [N] at 0.009 [s]

Min: -618.9 [N] at 0.123 [s]



Shock Test - Medium at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date: 04-24-03

Serial No: 015

Work File: 015SM 04-23-03

TEST RESULTS

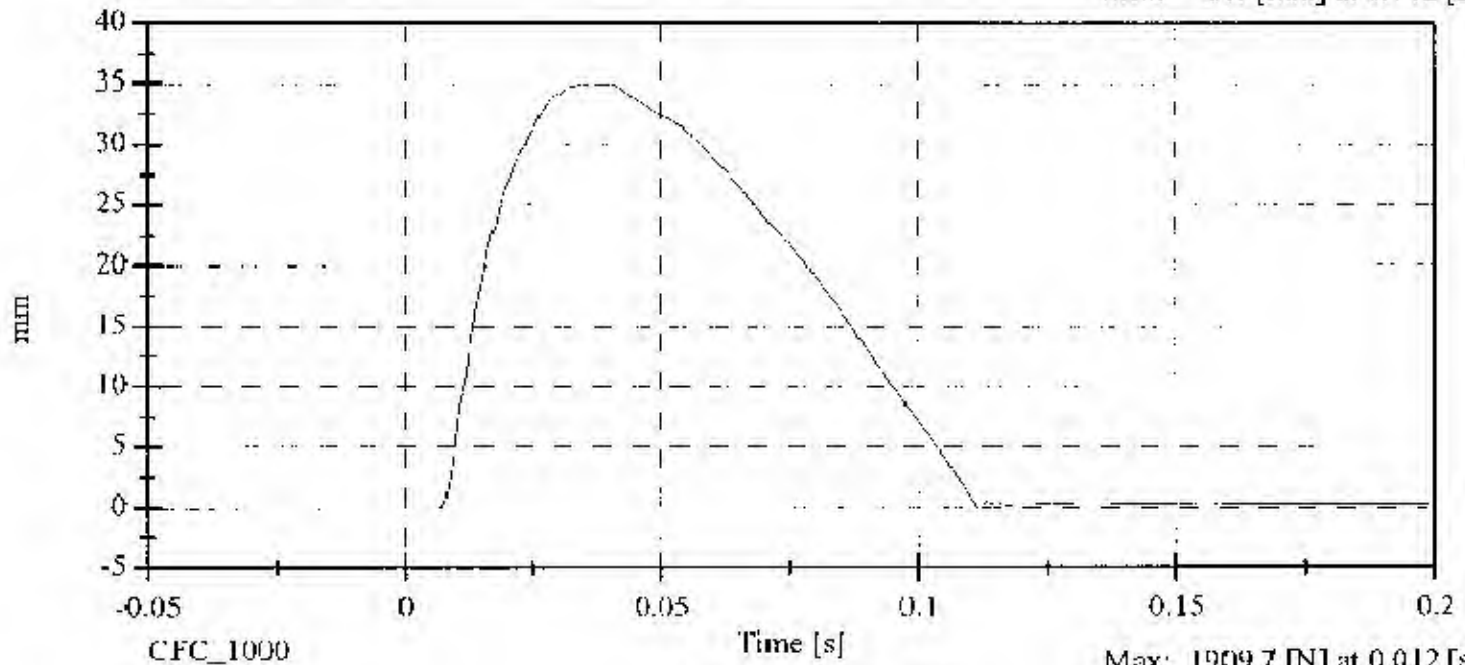
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Displacement:	32.00-37.00 mm	35.02 mm	Passed
Maximum Force:	1730.00-2099.00 N	1909.74 N	Passed

Shock Test - Medium

Displacement vs. Time

Max: 35.0 [mm] at 0.036 [s]

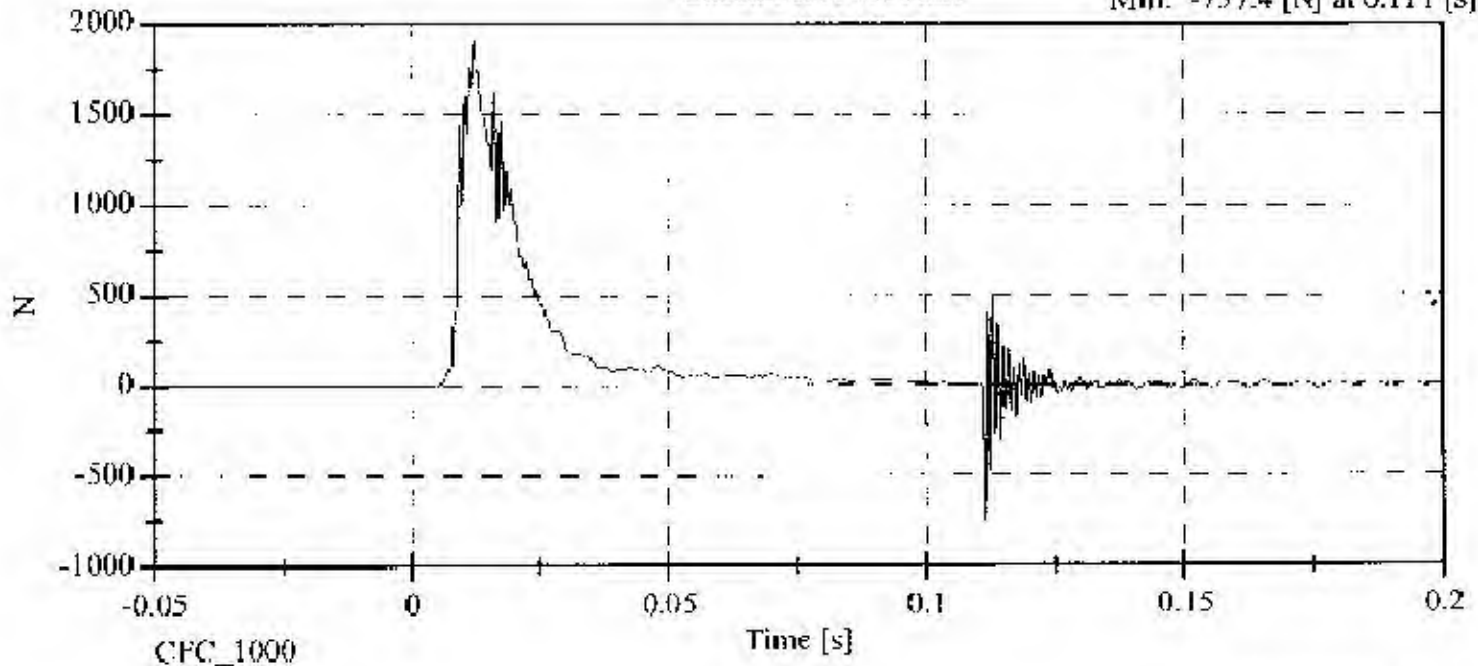
Min: -0.1 [mm] at 0.112 [s]



Shock Force vs. Time

Max: 1909.7 [N] at 0.012 [s]

Min: -757.4 [N] at 0.111 [s]



Shock - High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 015

Work File: 015SH2 04-23-03

TEST RESULTS

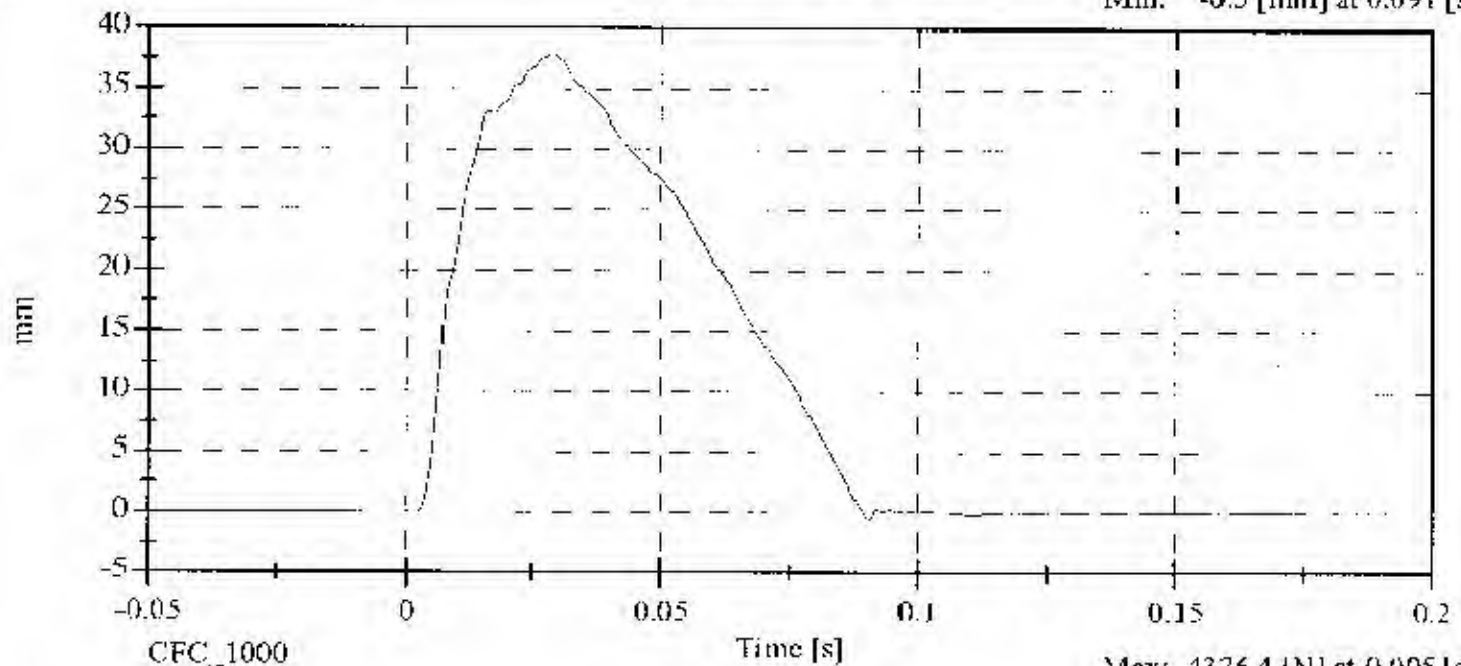
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	33.00-40.00 mm	37.86 mm	Passed
Maximum Force:	3741.00-4448.00 N	4336.39 N	Passed

Shock - High

Displacement vs. Time

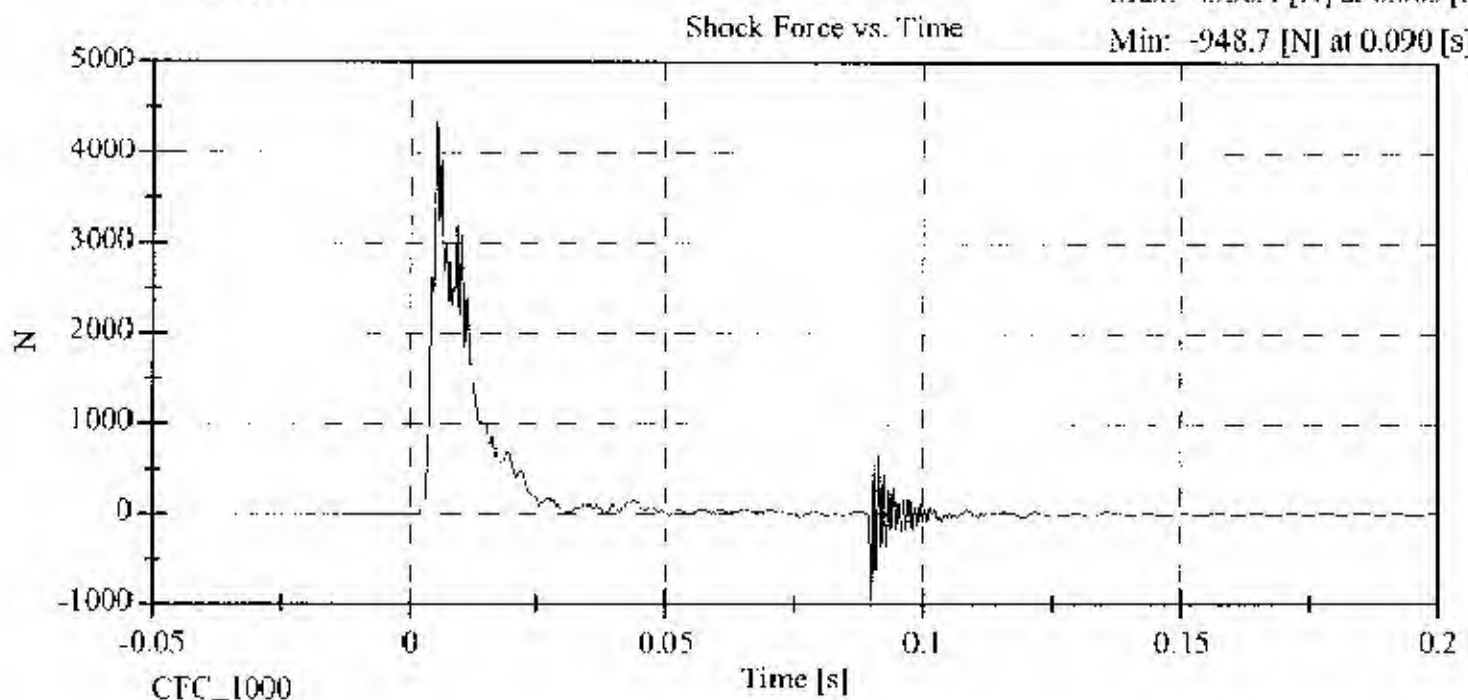
Max: 37.9 [mm] at 0.029 [s]

Min: -0.5 [mm] at 0.091 [s]



Max: 4336.4 [N] at 0.005 [s]

Min: -948.7 [N] at 0.090 [s]



**LATERAL THORAX IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

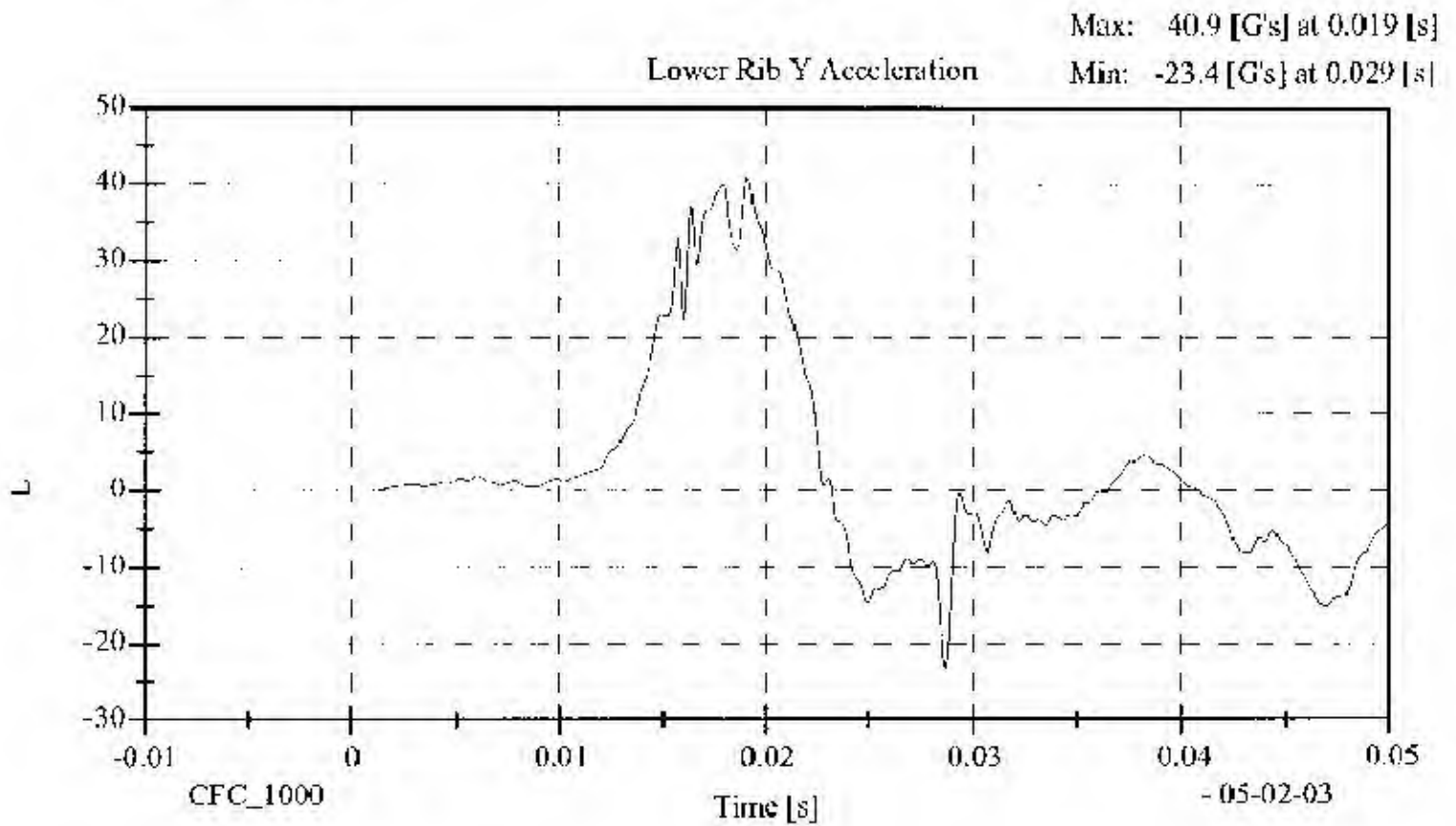
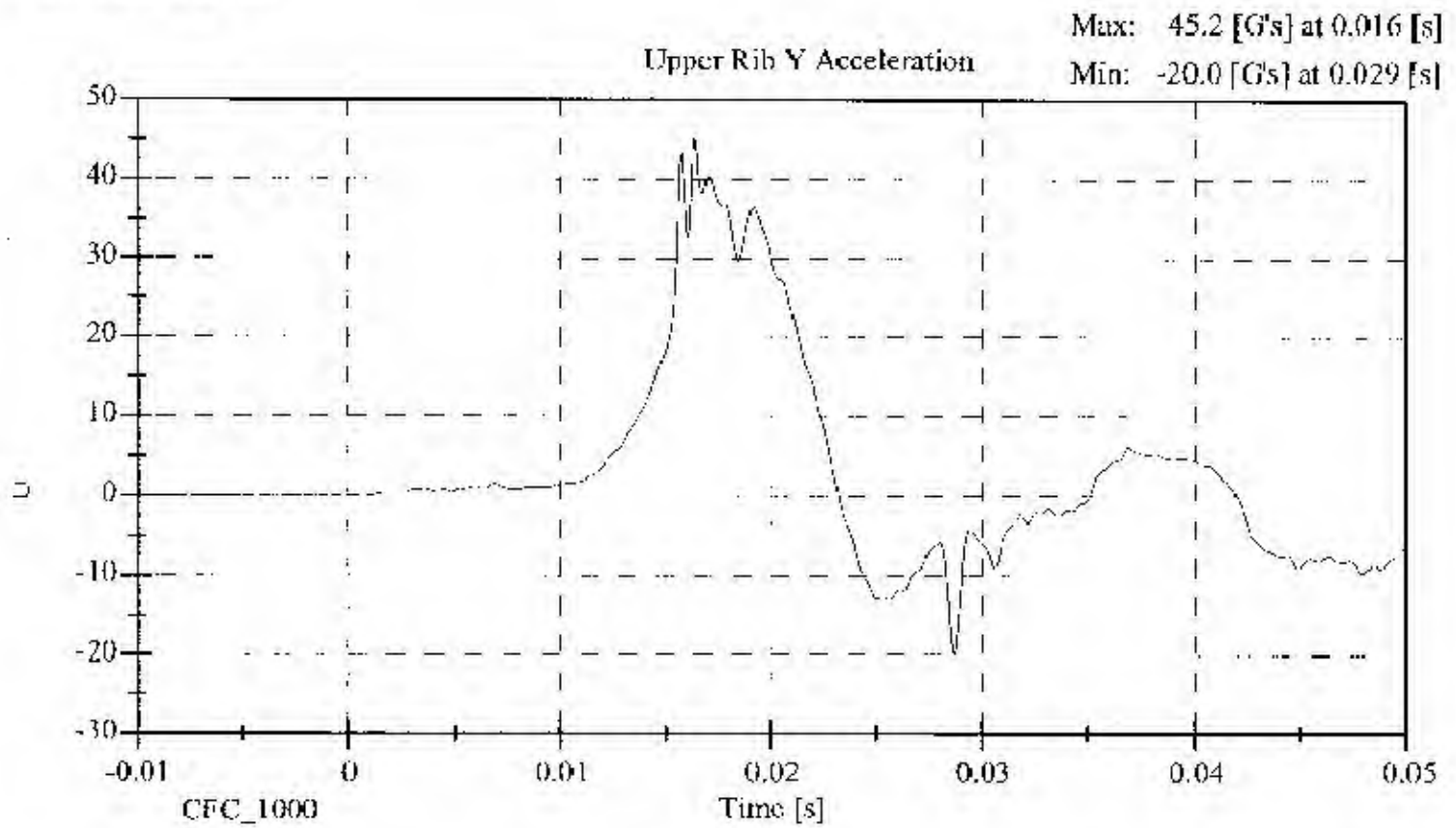
Laboratory Technician:

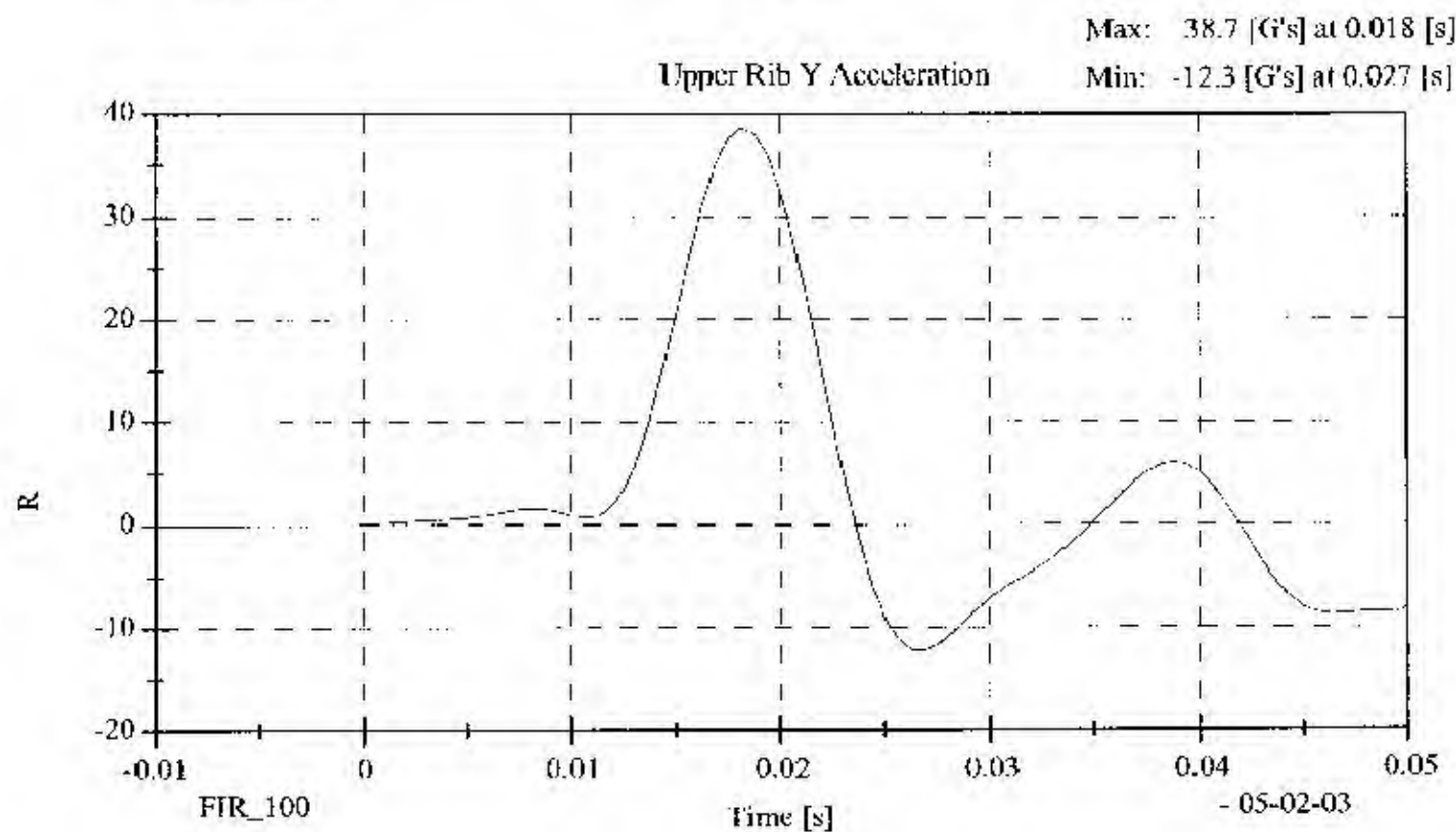
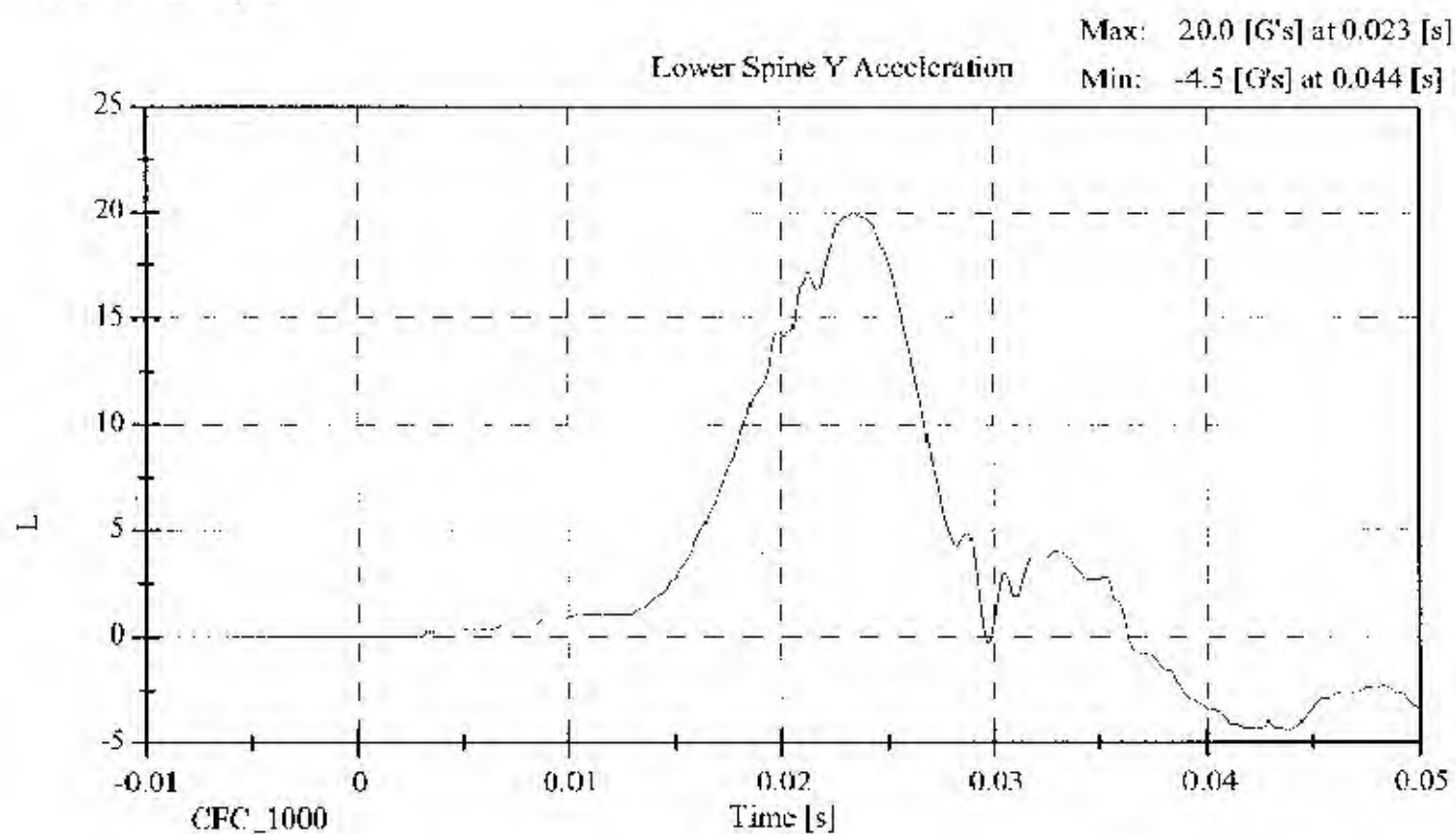
B. Swiecicki

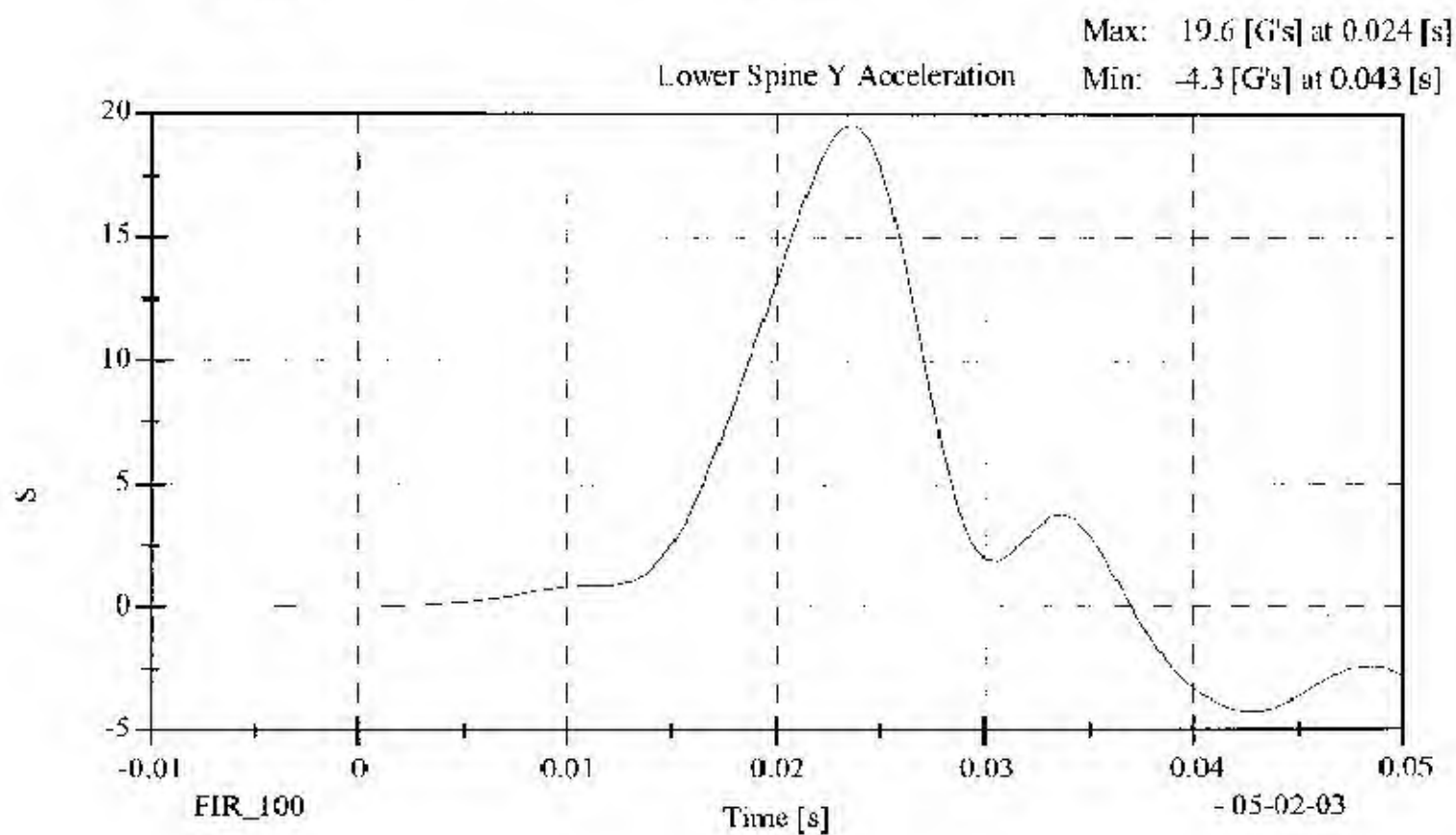
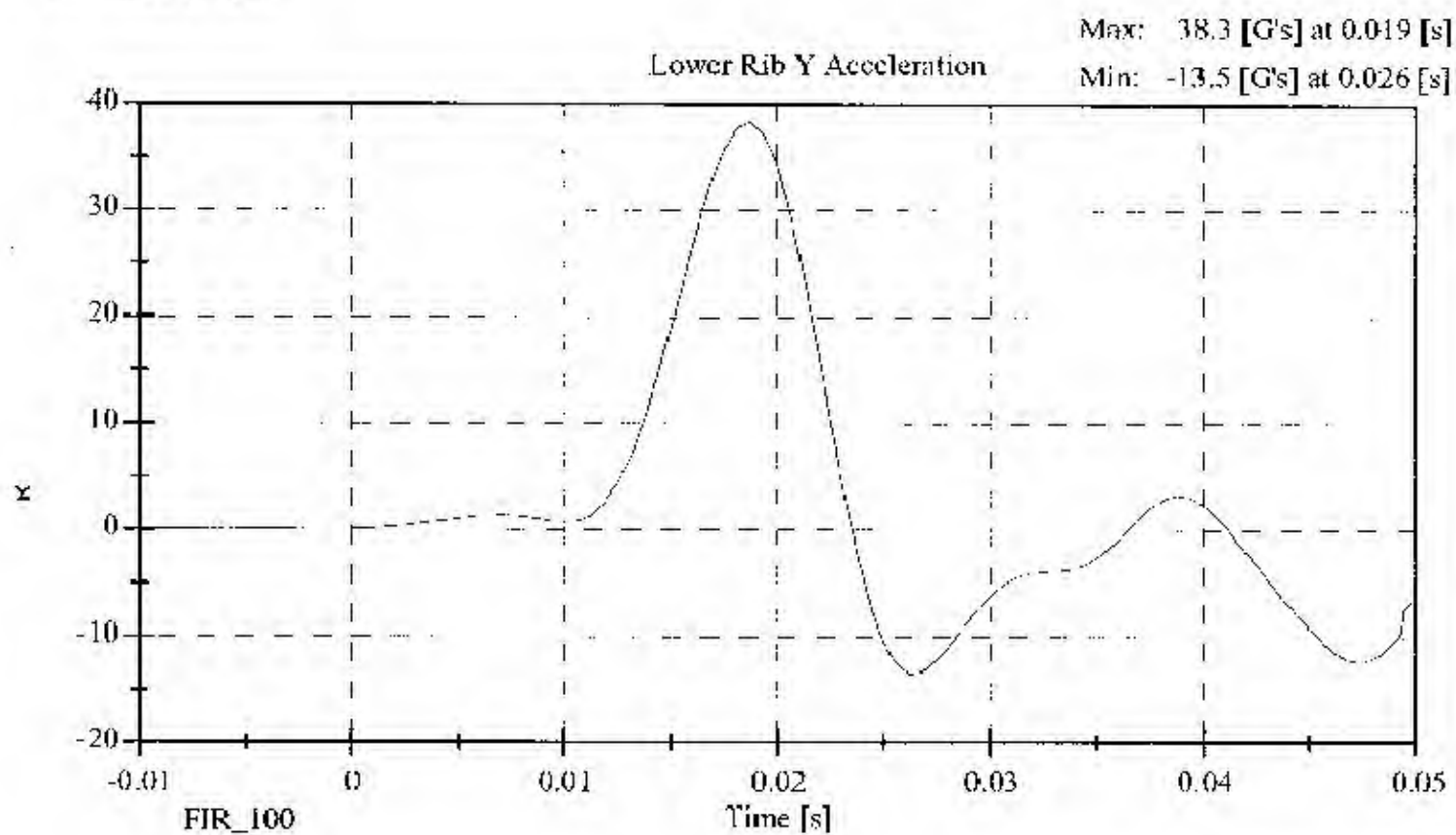
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.0 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	38.69
LOWER RIB (g's)	37 - 46	38.27
LOWER SPINE (g's)	15 - 22	19.60

REMARKS: None

015 Thorax Impact







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID 113 Serial No.: 015

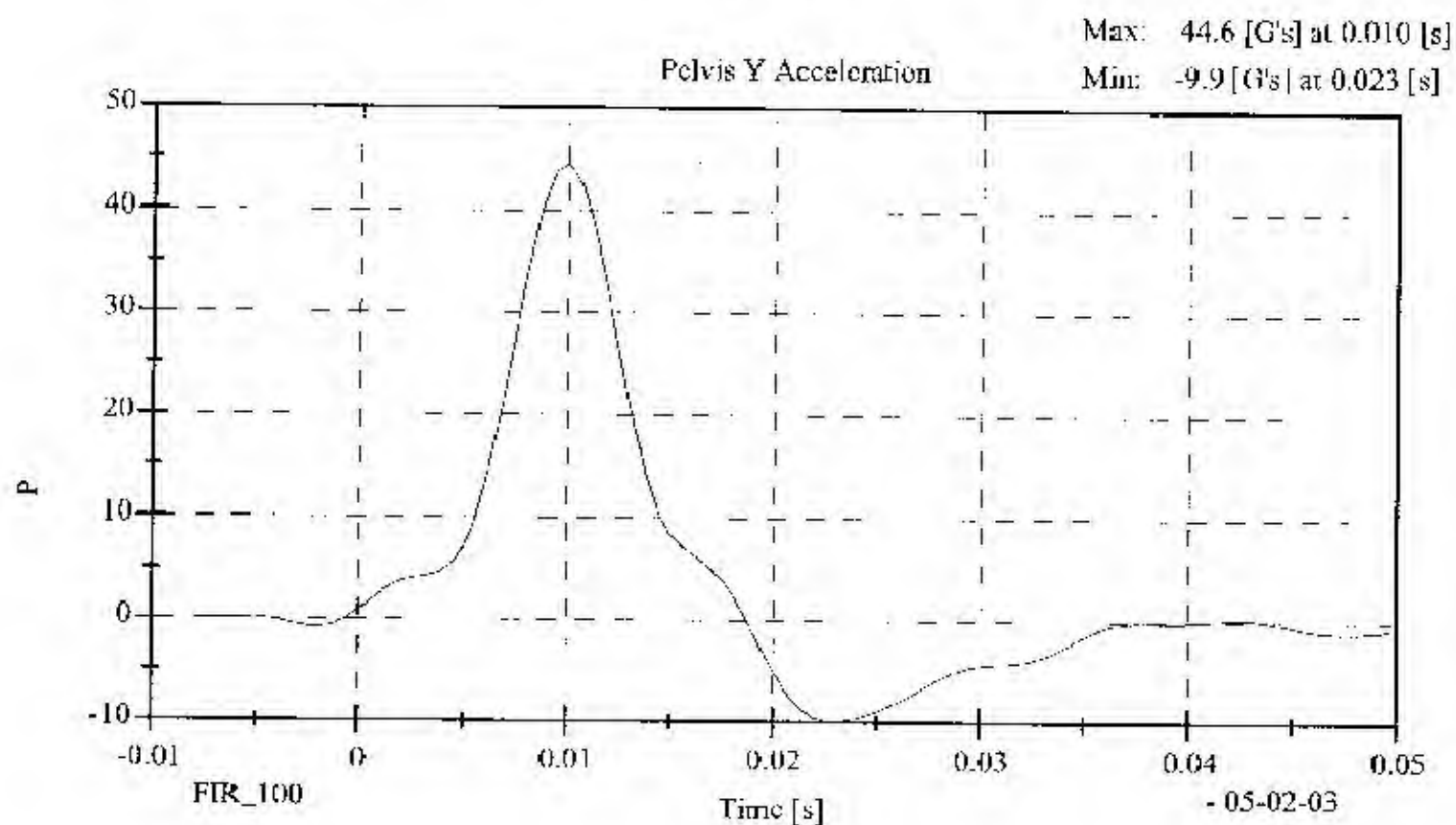
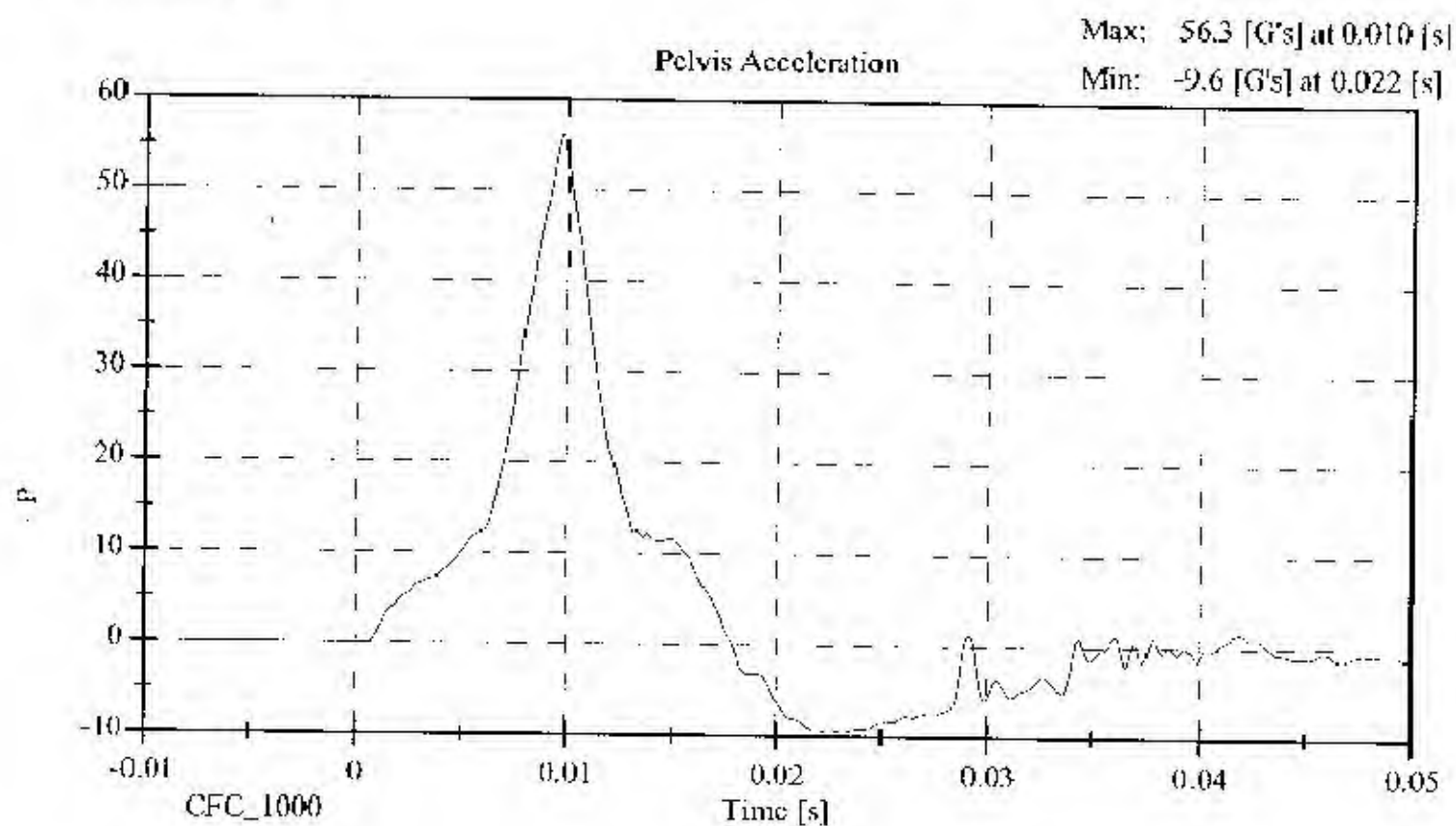
Sequential Test Number: 2

Date: May 2, 2003

Laboratory Technician: B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.31
PELVIS ACCELERATION (g's)	40 - 60	44.61

REMARKS: None



**HEAD DROP TEST
PRE-TEST**
(Test not required for SID certification)

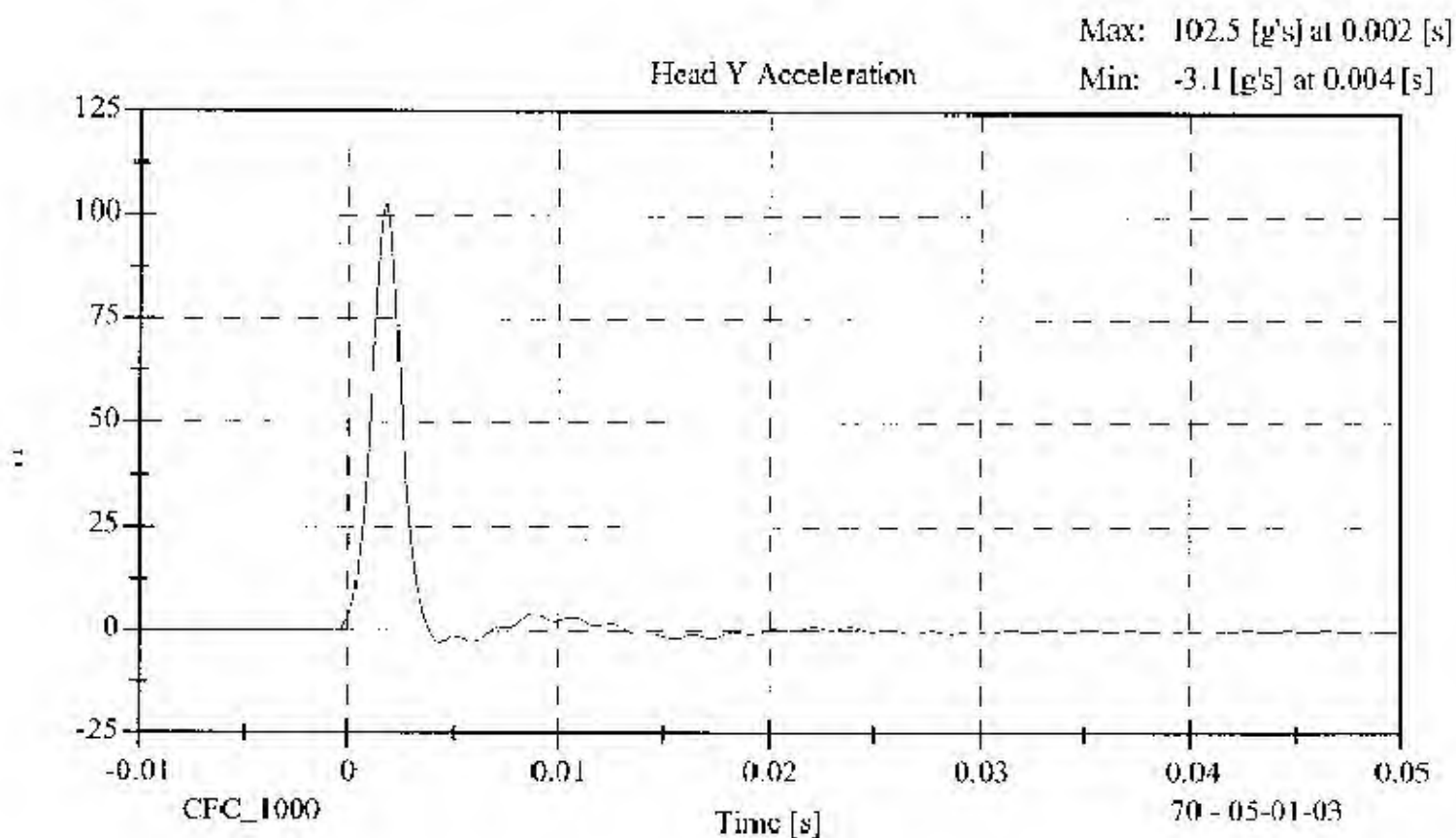
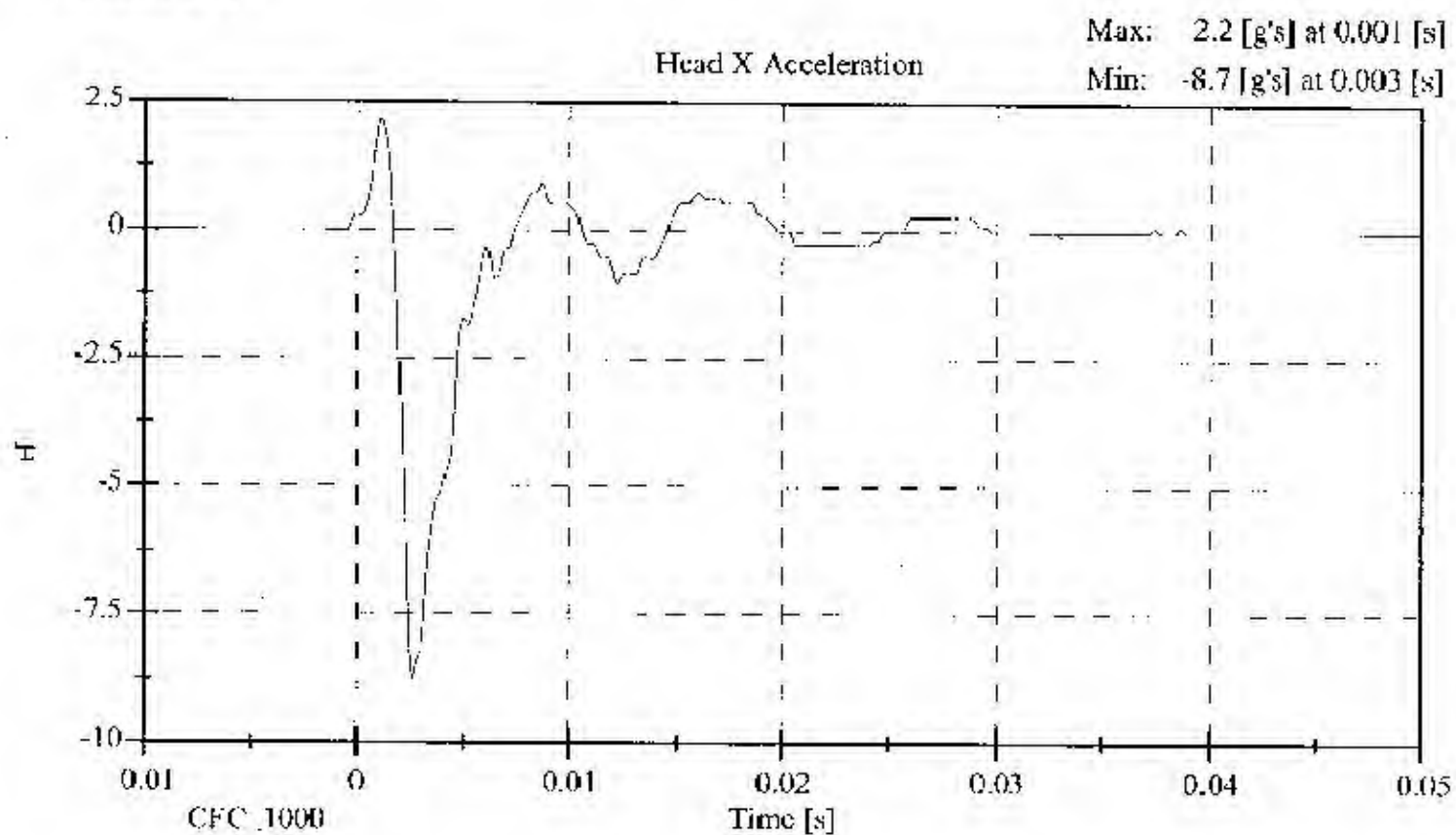
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No: 015 Sequential Test Number: 2
 Date: May 1, 2003 Laboratory Technician: B. Swiecicki

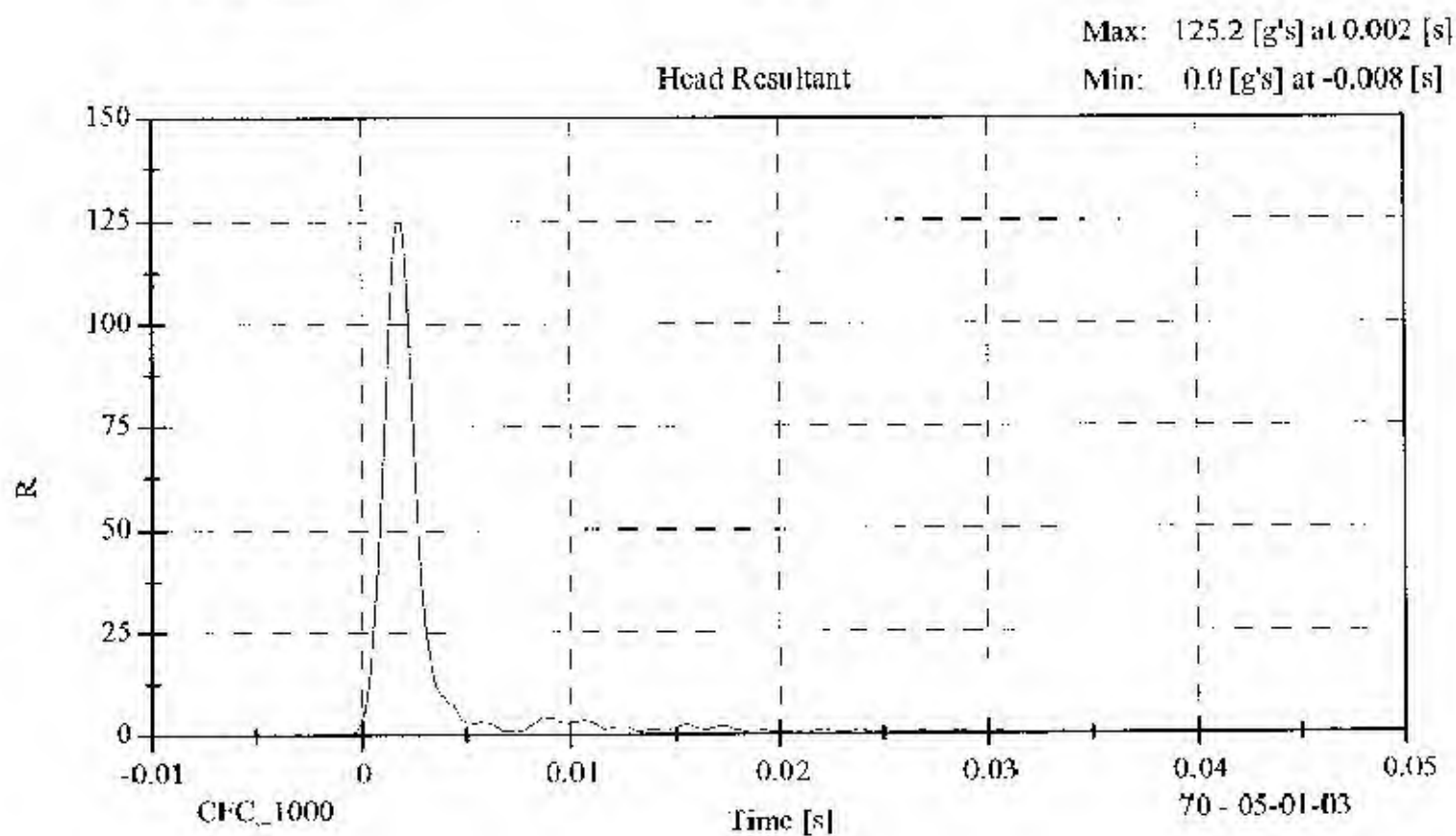
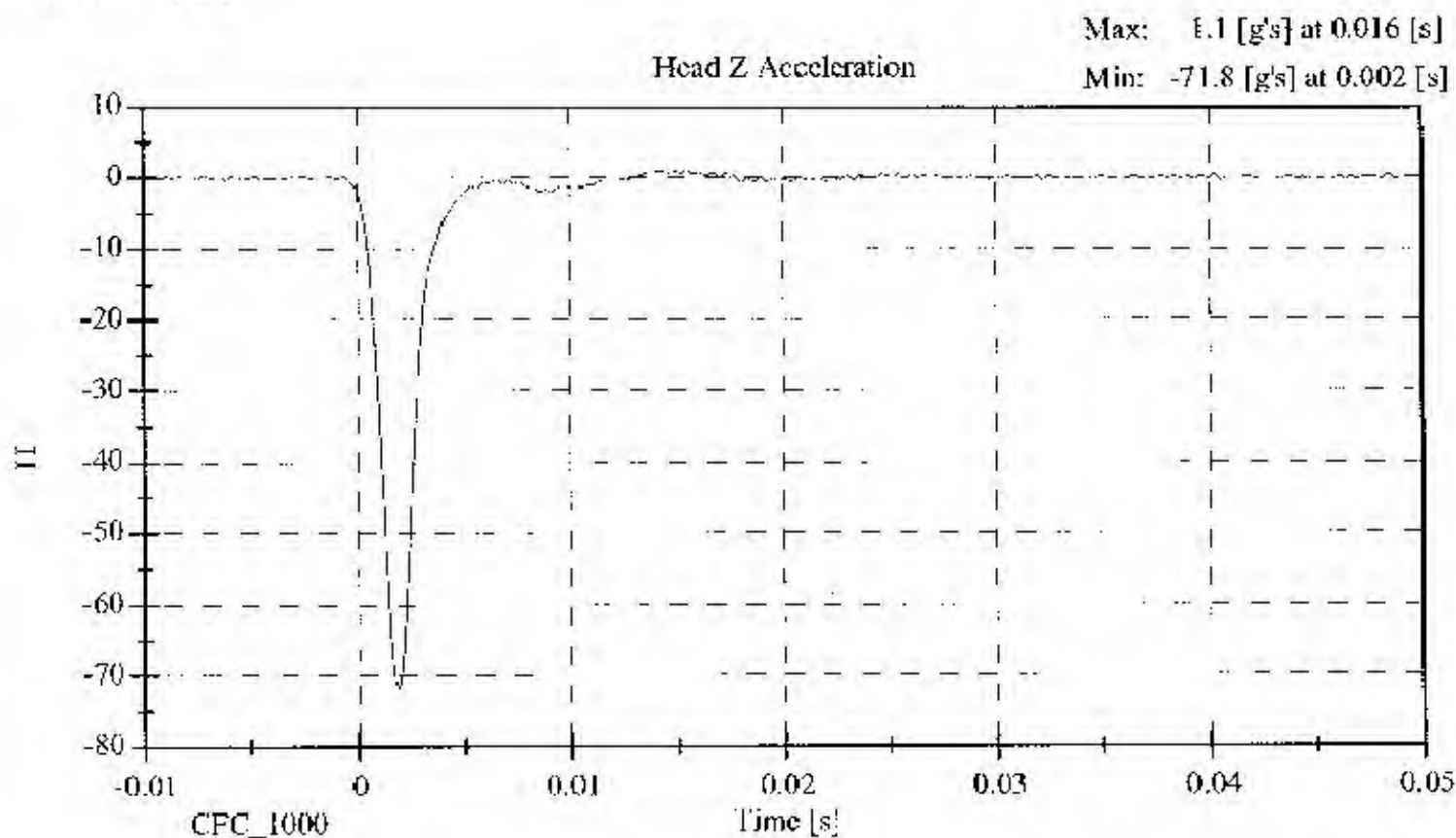
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	41.0
PEAK RESULTANT ACCELERATION (Gs)	120 - 150	125.17
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	2.15
CURVE PERCENT NONMODAL (%)	< 15	3.69

REMARKS: None

015 Head Drop



015 Head Drop



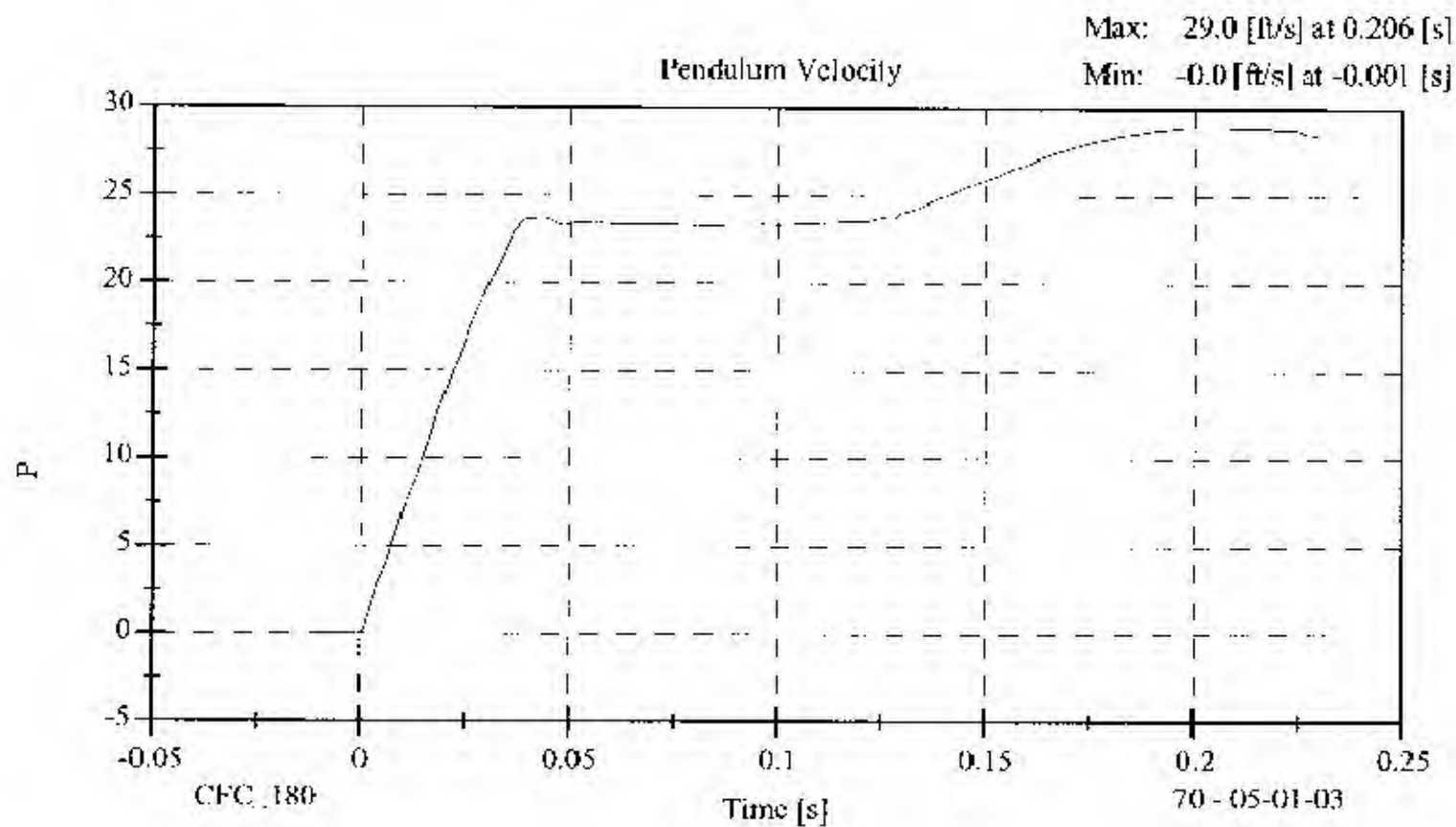
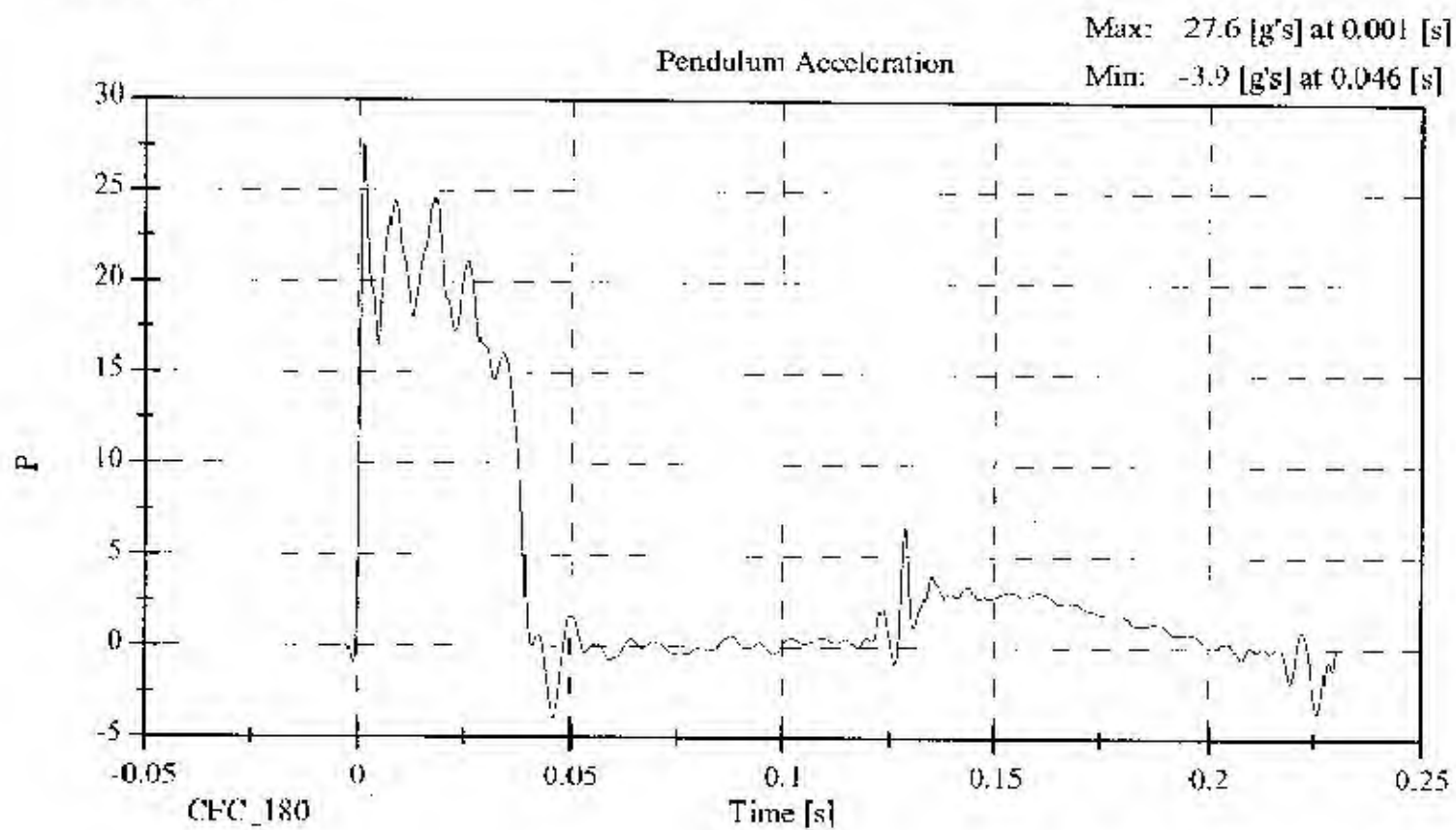
LATERAL NECK BENDING TEST
PRE-TEST
 (Test not required for SID certification)

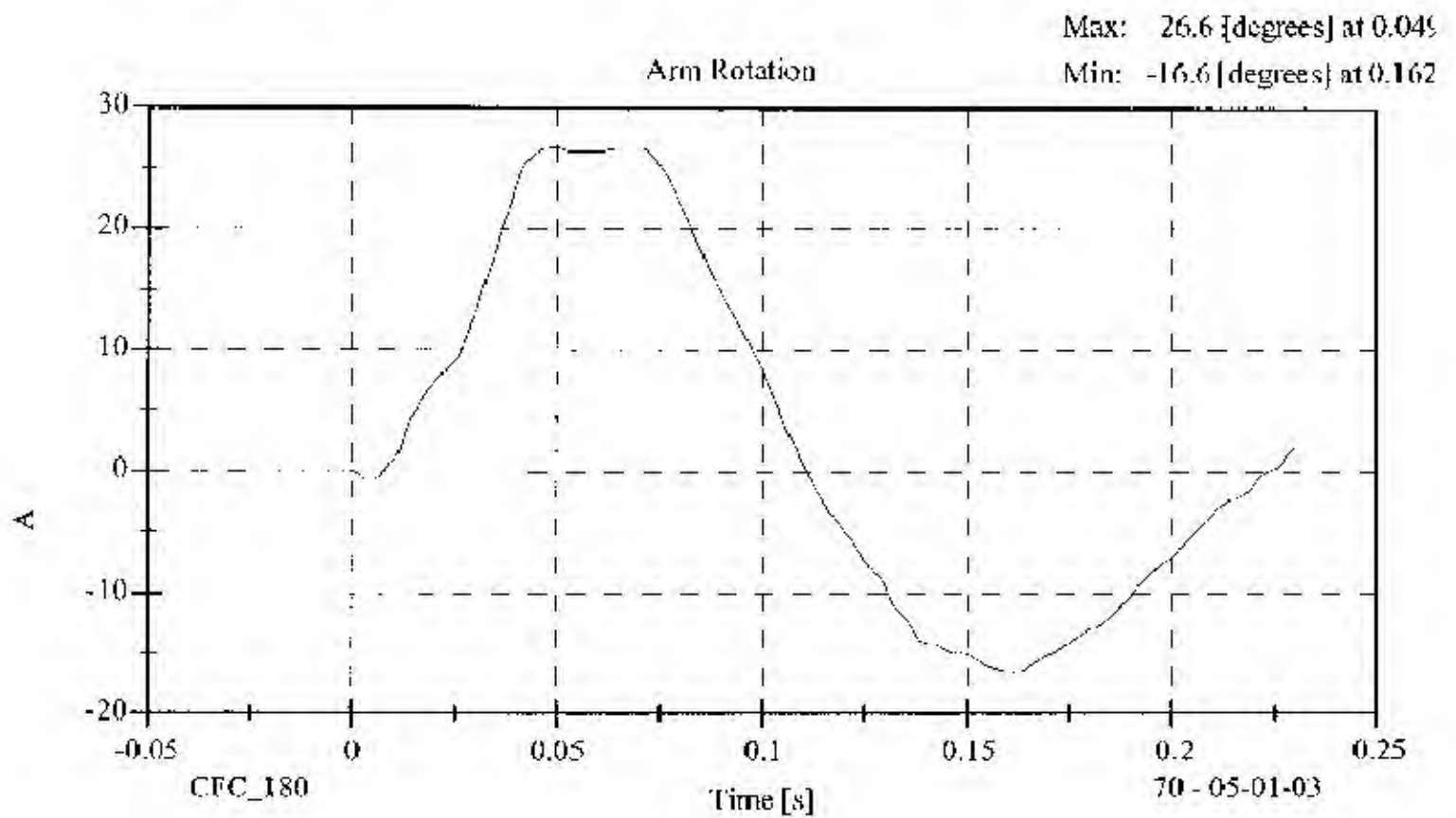
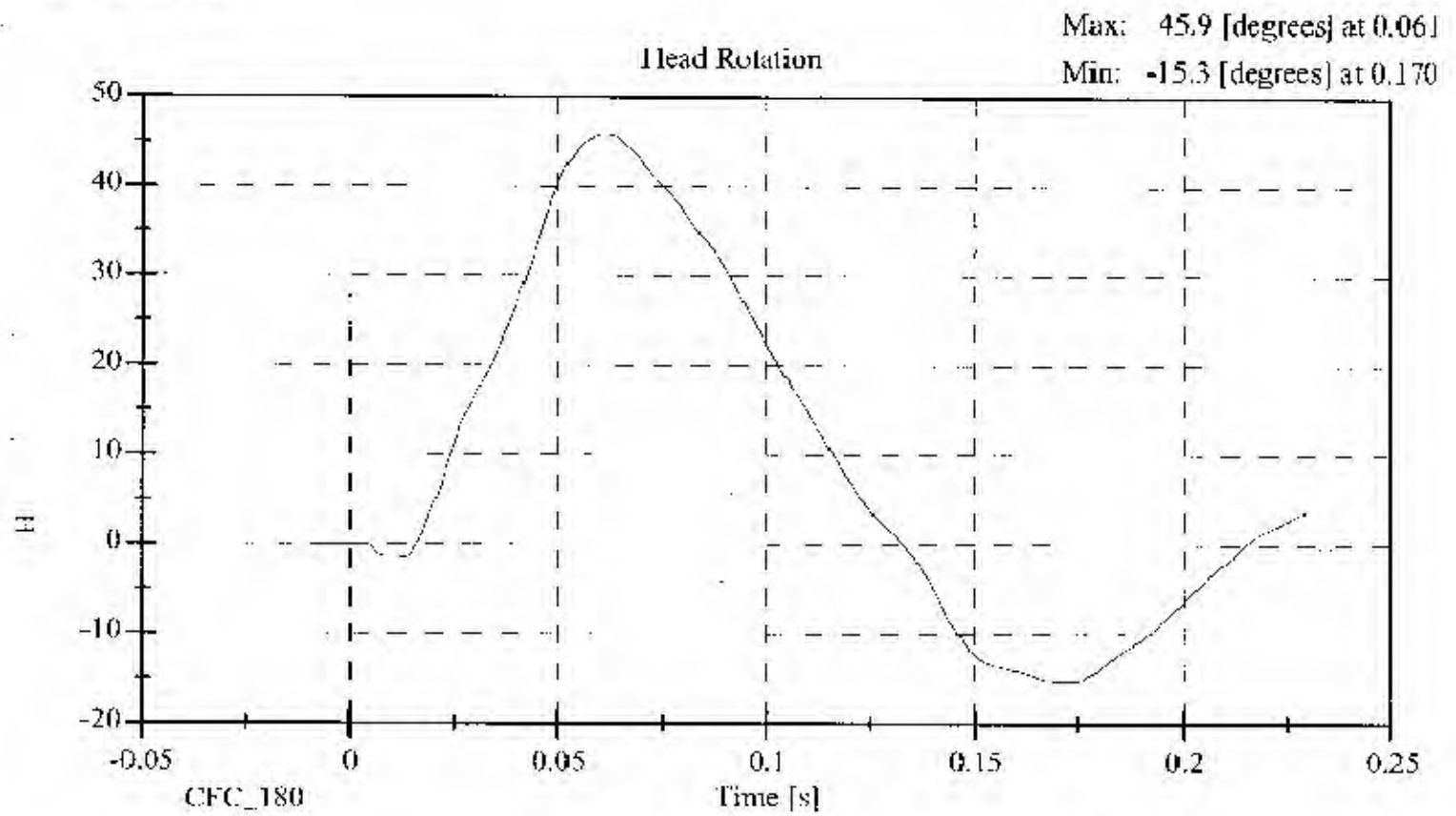
CONFIGURED FOR LEFT SIDE IMPACT

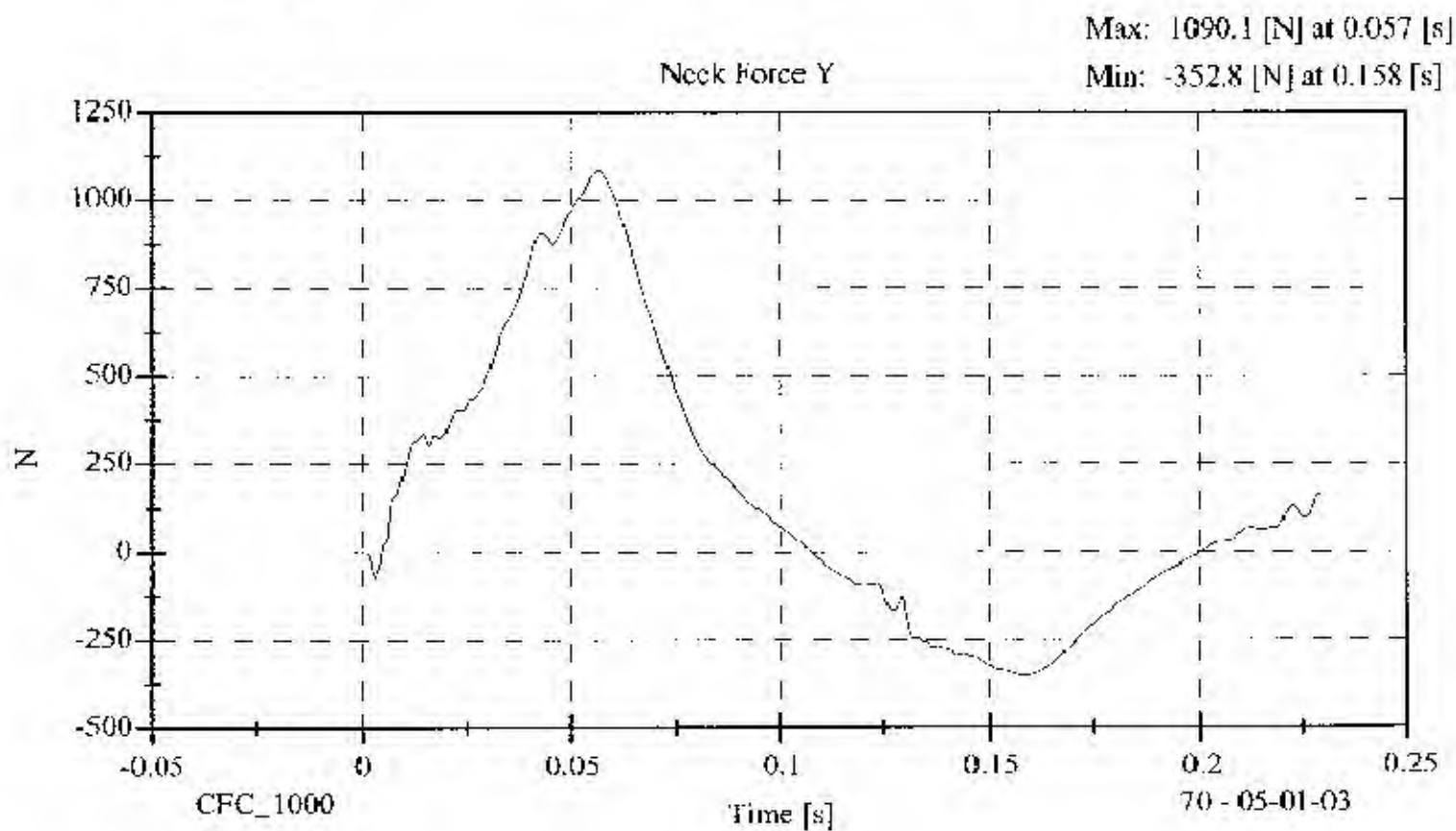
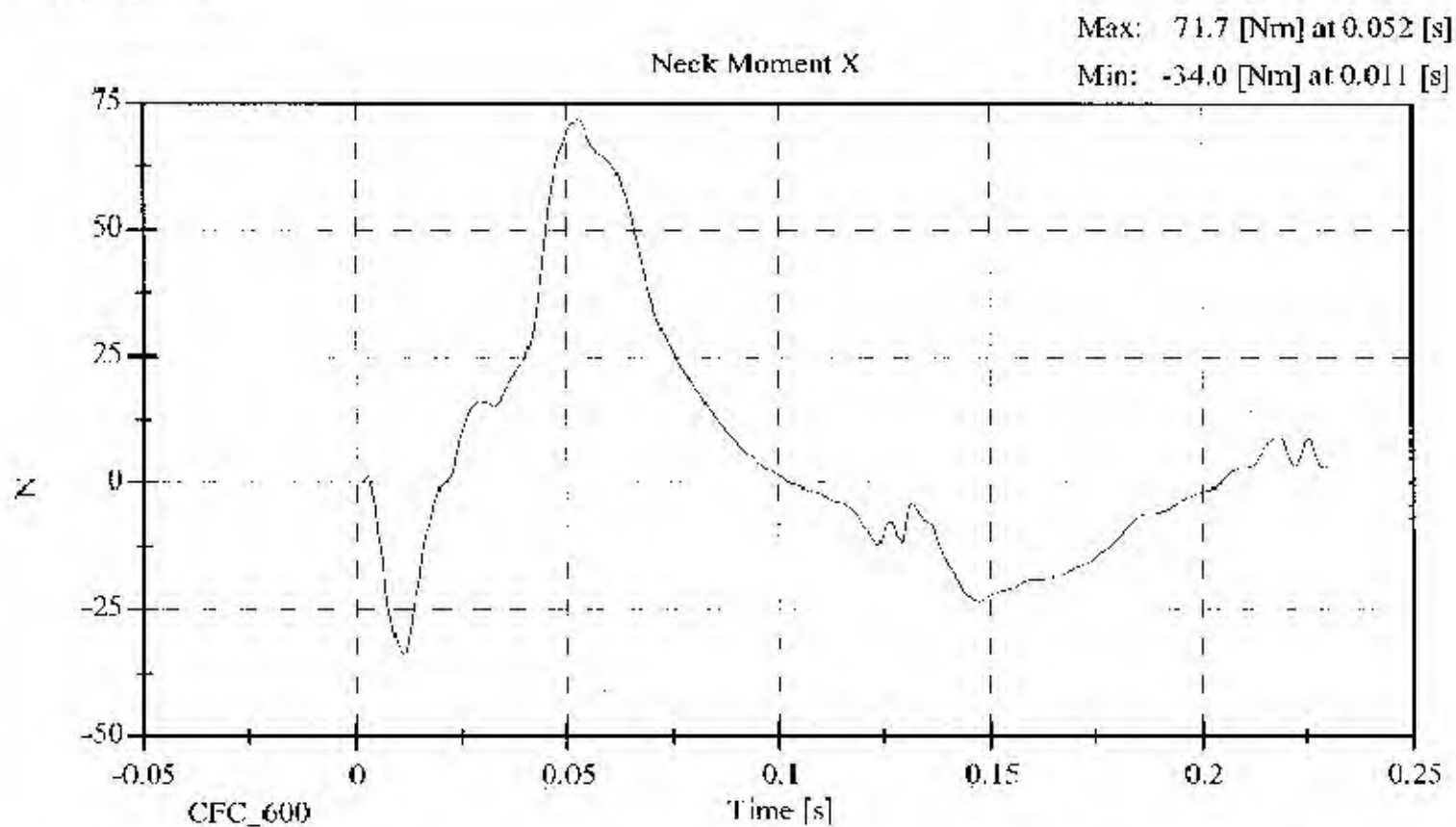
SID Serial No.: 015 Sequential Test Number: 2
 Date: May 1, 2003 Laboratory Technician: B. Swieczicki

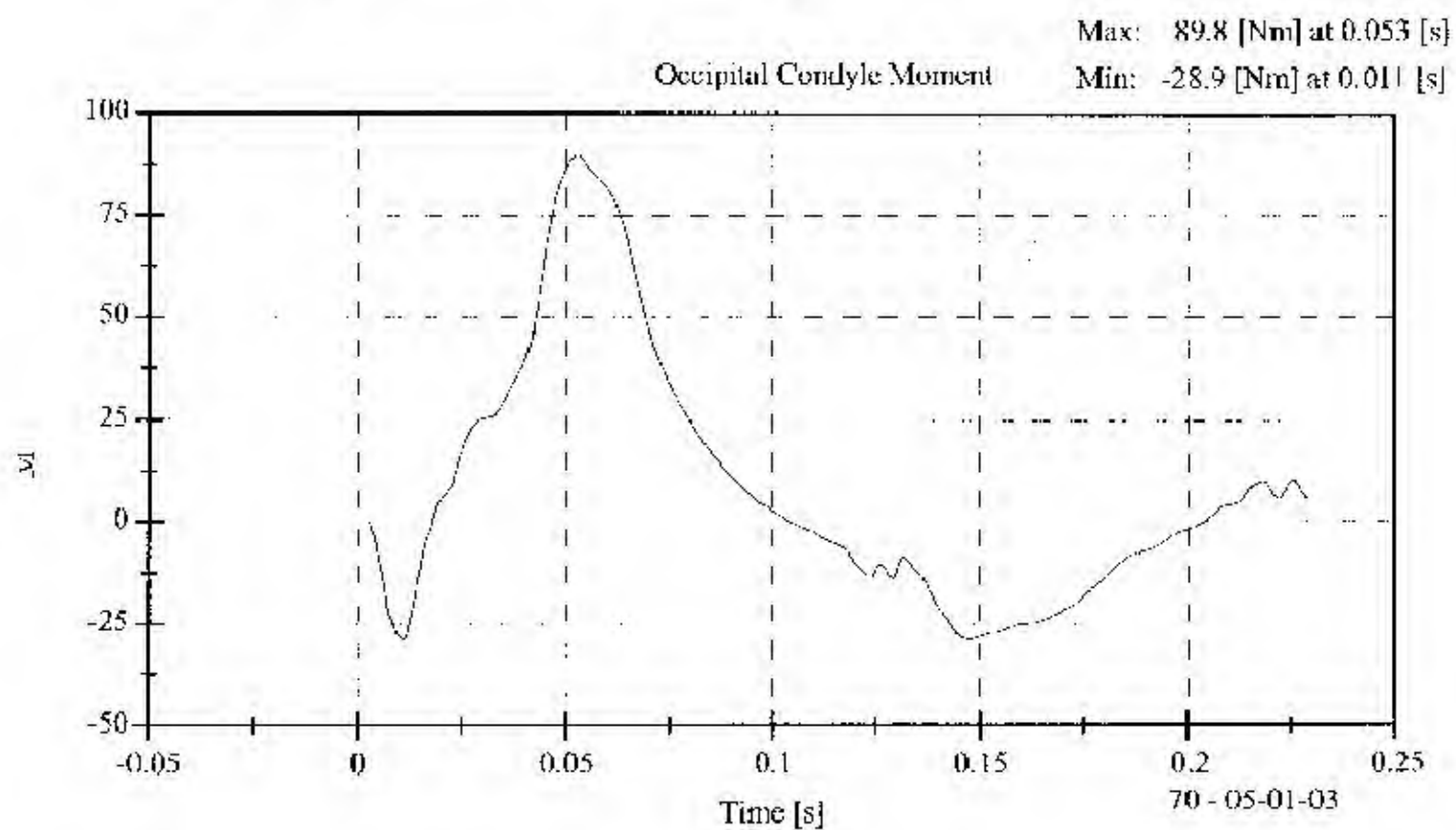
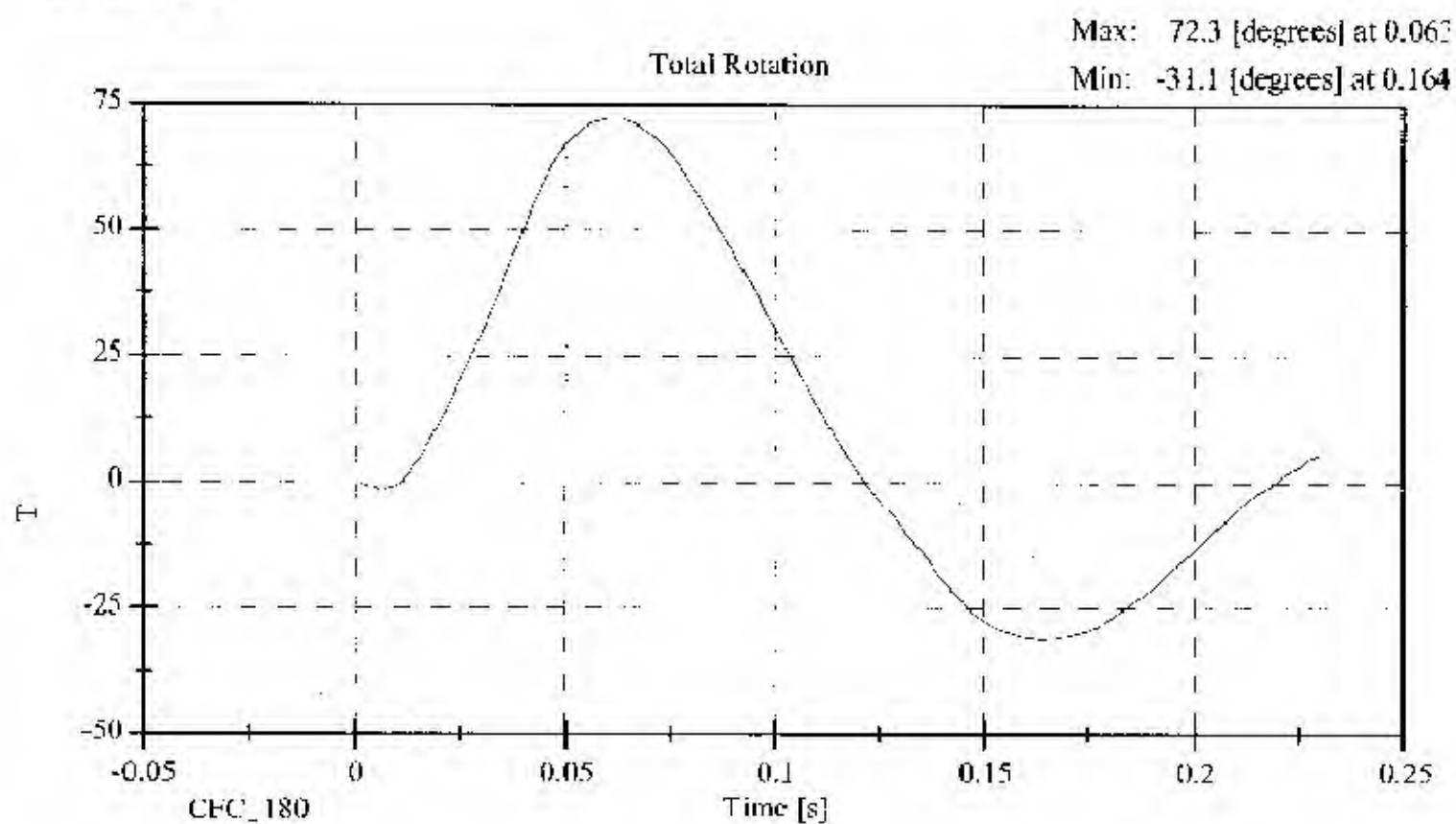
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.99
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.09
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.17
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.00
DELTA V @ 40-70 ms (m/s)	6.27 - 7.61	7.24
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	72.3
ROT. ANGLE TIME to ZERO (ms)	50 - 70	59.1
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	89.77
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	51.4
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION w/ MOMENT (ms)	0 - 20	9.9

REMARKS: None









**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID-H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 13 mm (N)	104 - 162	126.1
FORCE @ 19 mm (N)	163 - 221	187.7
FORCE @ 25 mm (N)	222 - 280	260.2
FORCE @ 33 mm (N)	325 - 391	371.4

REMARKS: None

Dummy S/N 015

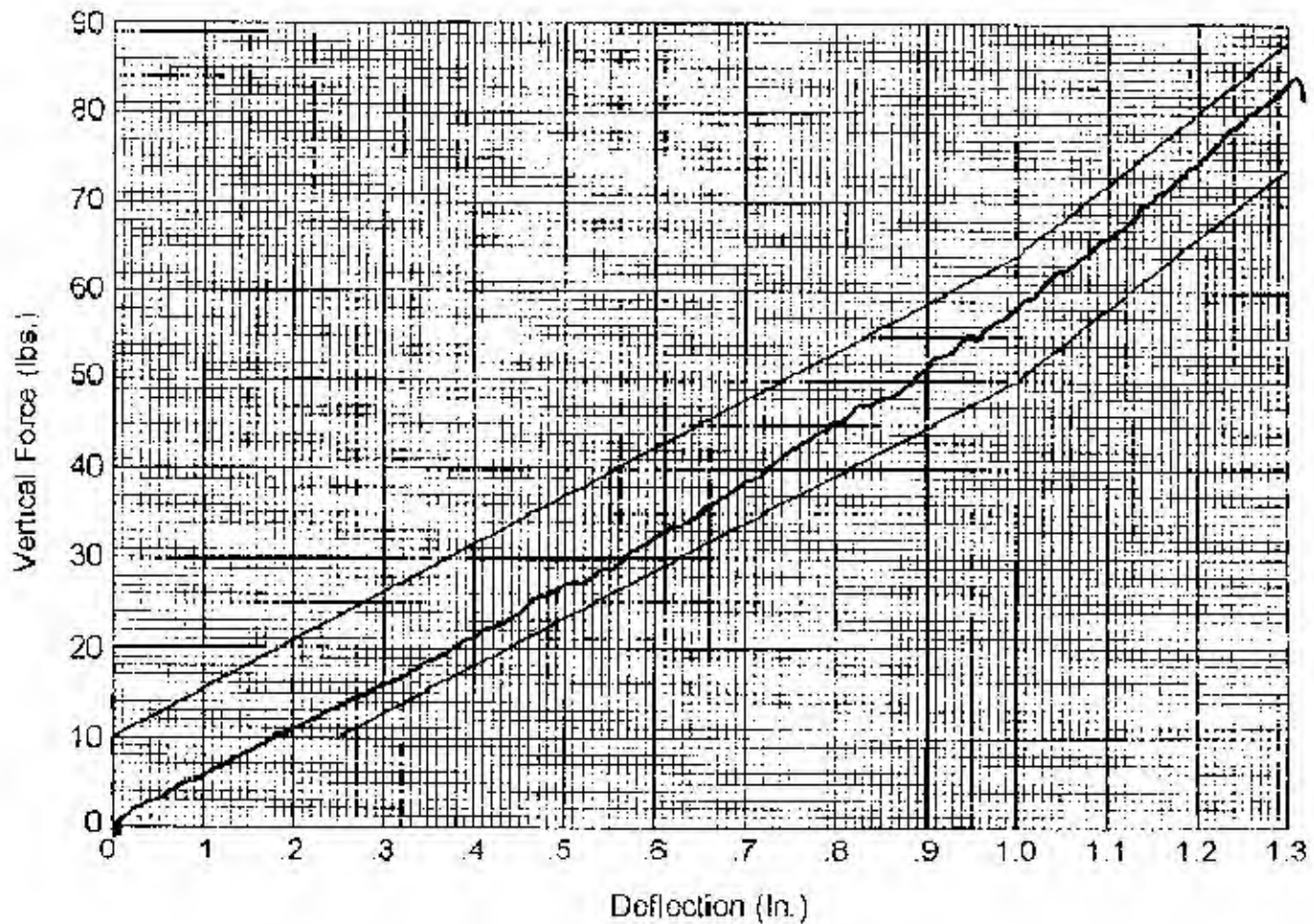
W/A

Date 5-02-03

Performed By BS

Temp. 70

Humidity 37%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
 (Test not required for SID certification)

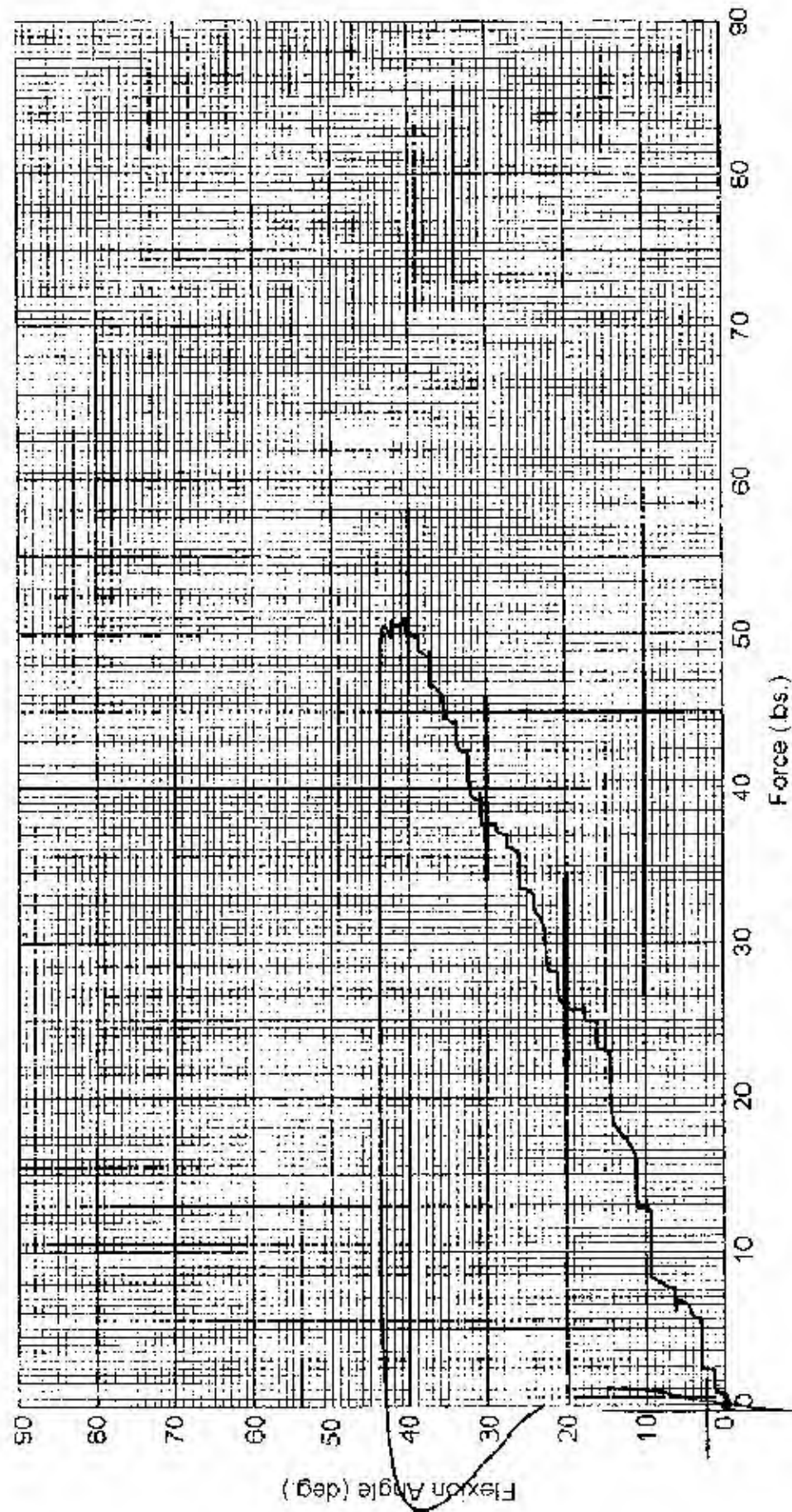
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
 Date: May 2, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	114.3
FORCE @ 30° (N)	151.2 - 204.6	167.5
FORCE @ 40° (N)	204.6 - 258	222.4
RETURN ANGLE	12° max.	2°

REMARKS: None

Dummy S/N 015
 WIA -
 Date 5-02-83
 Performed By [Signature]
 Temp. 70°
 Humidity 37%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
 Date: May 2, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID H3 NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swicicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	386 - 391	371

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

Date: April 25, 2003

Laboratory Technician:

B. Swiecicki

DAMPER IDENTIFICATION:

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	40.0
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	934.7
	DISPLACEMENT (mm)	30 - 35	31.7
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1867.3
	DISPLACEMENT (mm)	32 - 37	34.9
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4438.7
	DISPLACEMENT (mm)	33 - 40	37.6

DAMPER SETTING: 5

REMARKS: None

Shock Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 016

Work File: 016SL1 04-25-03

TEST RESULTS

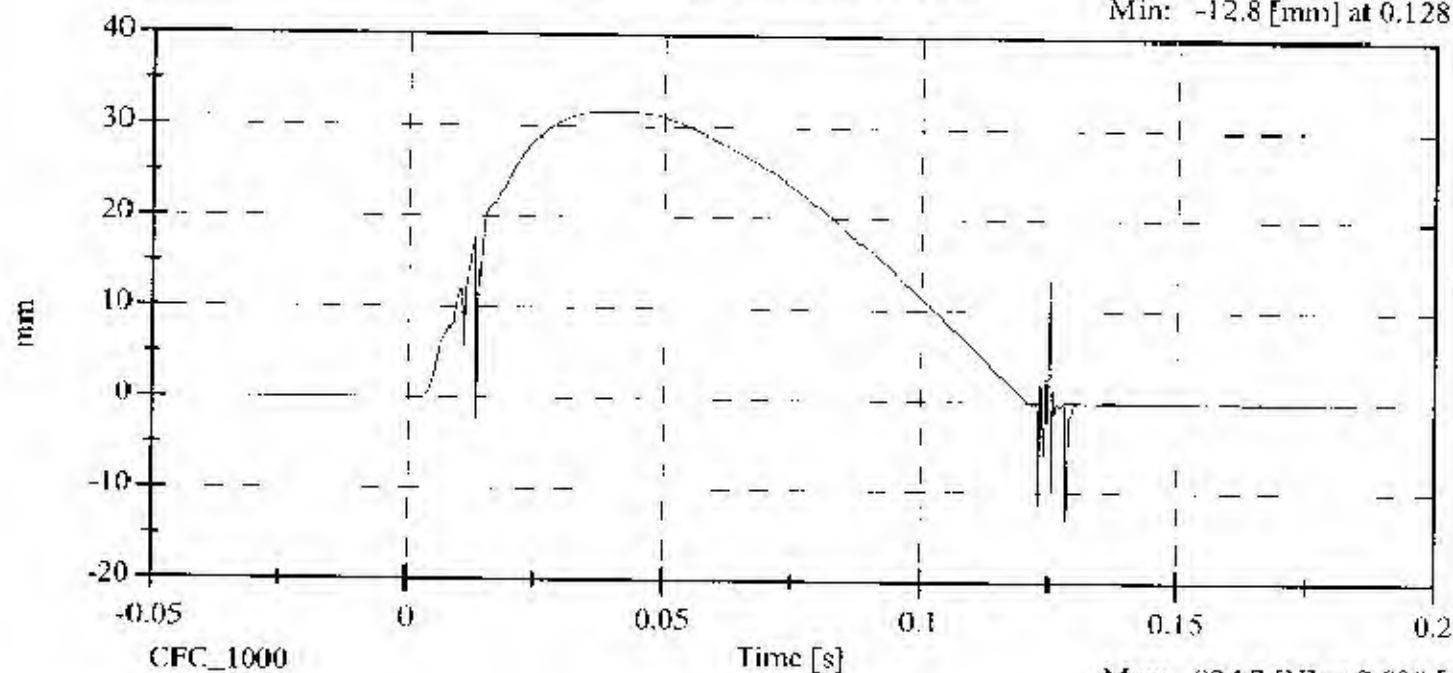
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	30.00-35.00 mm	31.65 mm	Passed
Maximum Force:	836.00-1125.00 N	934.69 N	Passed

Shock Low

Displacement vs. Time

Max: 31.6 [mm] at 0.037 [s]

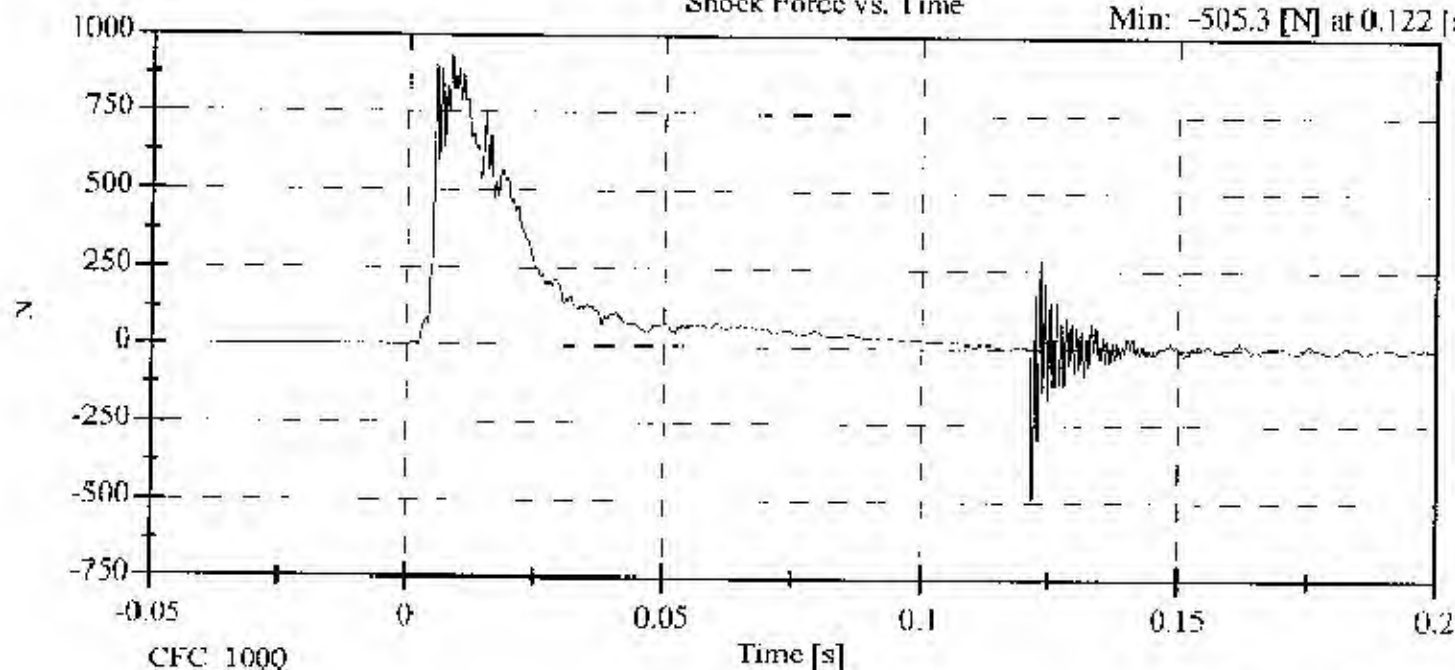
Min: -12.8 [mm] at 0.128 [s]



Shock Force vs. Time

Max: 934.7 [N] at 0.009 [s]

Min: -505.3 [N] at 0.122 [s]



Shock Med at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 016

Work File: 016SM 04-25-03

TEST RESULTS

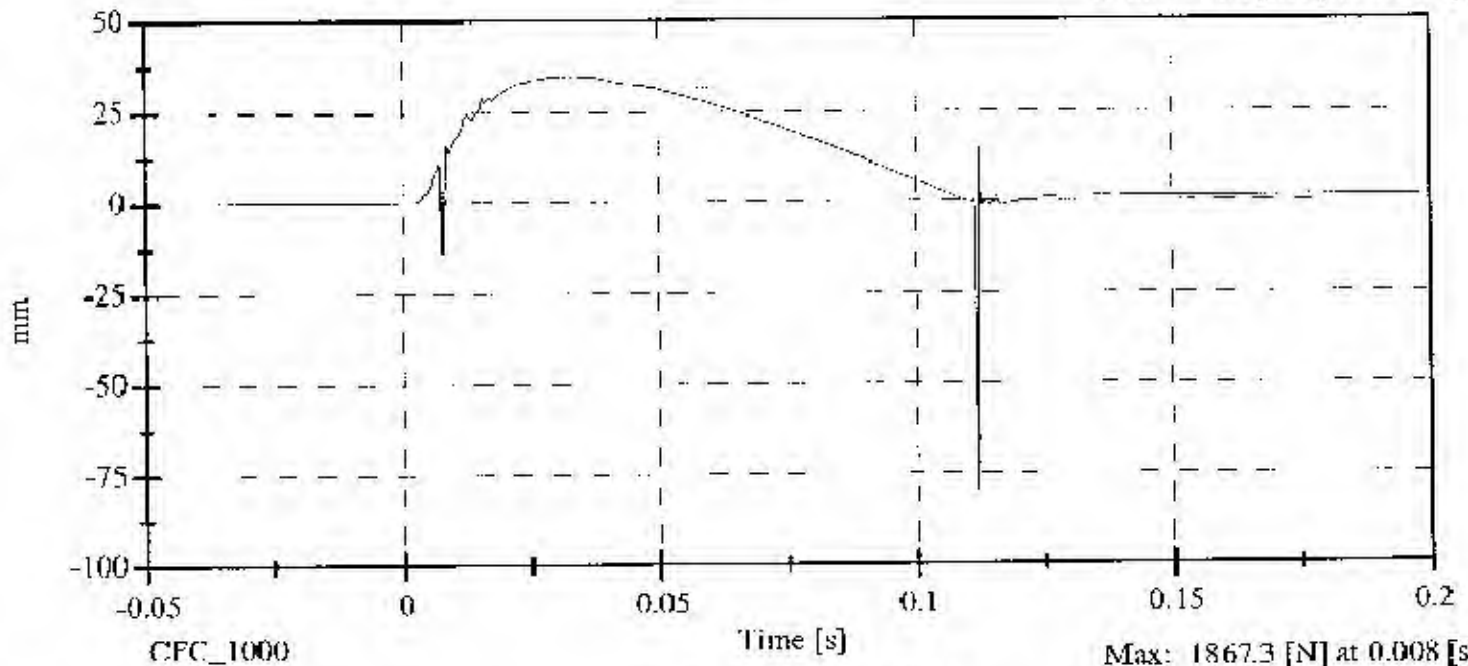
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	32.00-37.00 mm	34.91 mm	Passed
Maximum Force:	1730.00-2099.00 N	1867.29 N	Passed

Shock Med

Displacement vs. Time

Max: 34.9 [mm] at 0.033 [s]

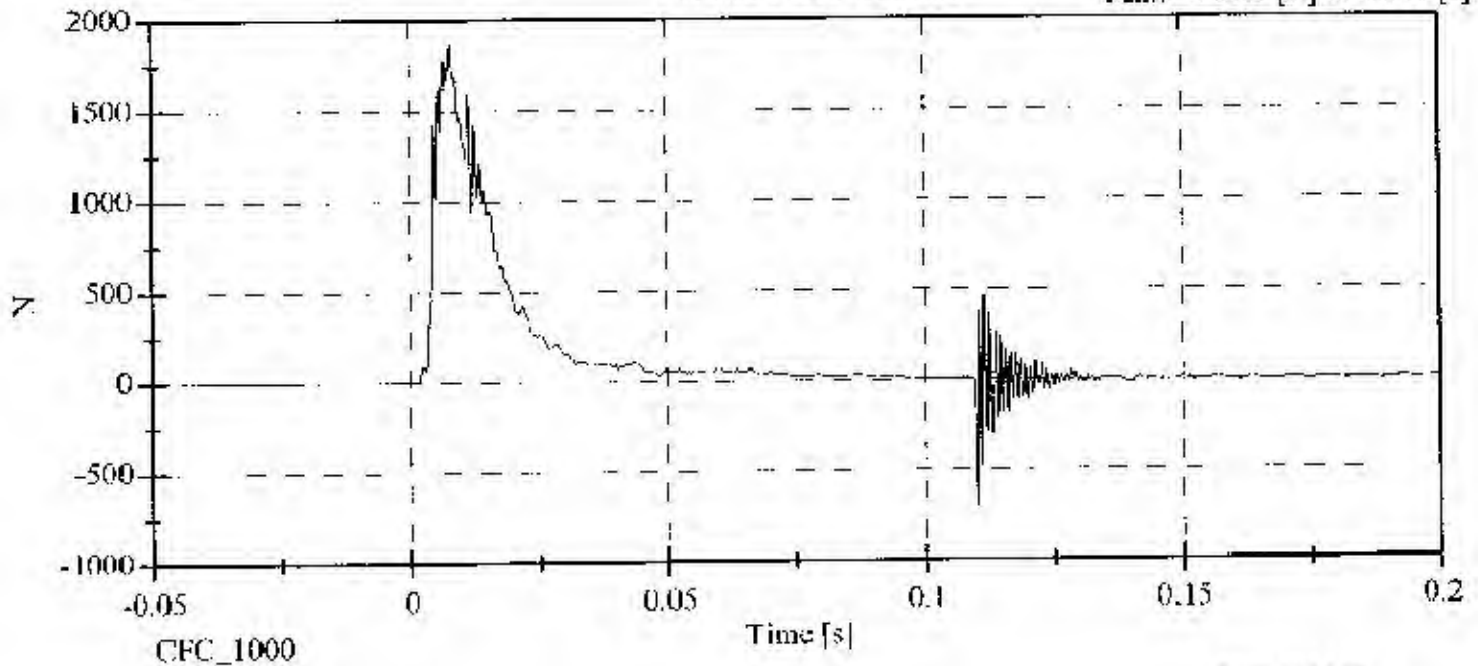
Min: -79.4 [mm] at 0.112 [s]



Shock Force vs. Time

Max: 1867.3 [N] at 0.008 [s]

Min: -710.5 [N] at 0.110 [s]



Shock High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date:

04-25-03

Serial No:

016

Work File:

016SH2 04-25-03

TEST RESULTS

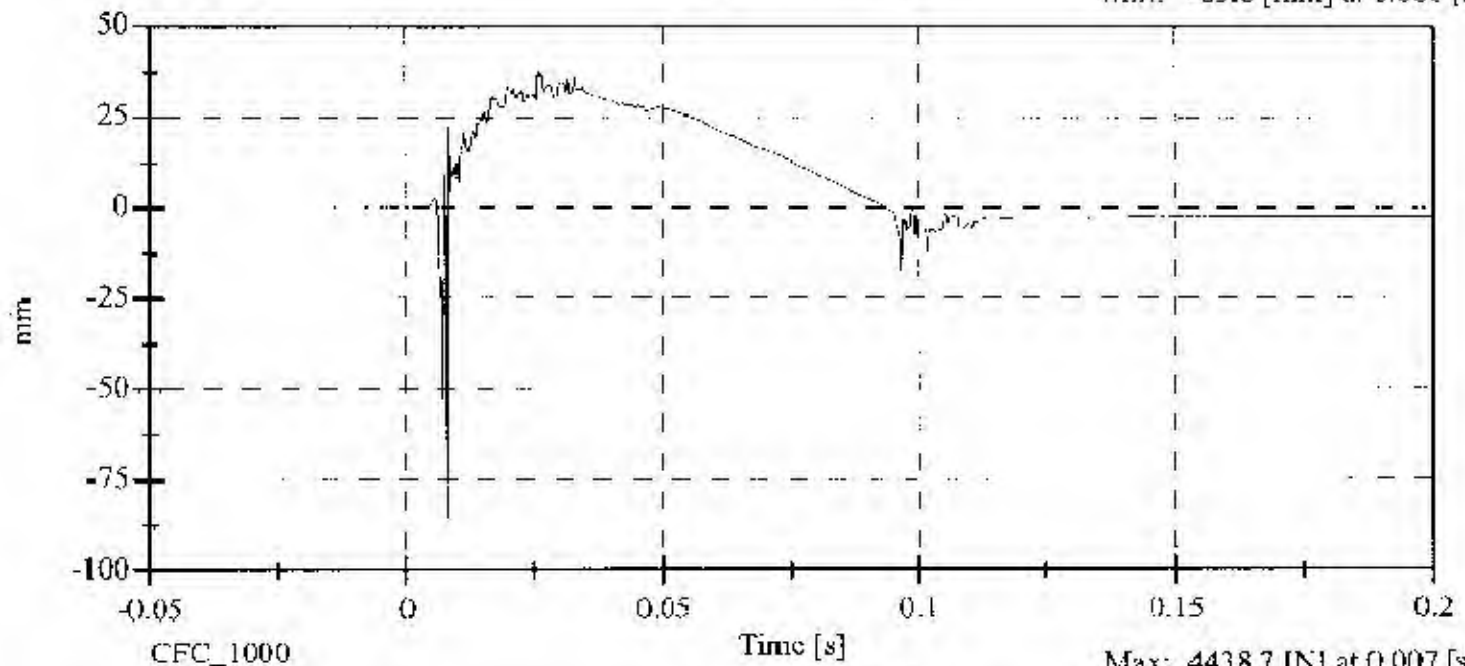
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	33.00-40.00 mm	37.56 mm	Passed
Maximum Force:	3741.00-4448.00 N	4438.69 N	Passed

Shock High

Displacement vs. Time

Max: 37.6 [mm] at 0.026 [s]

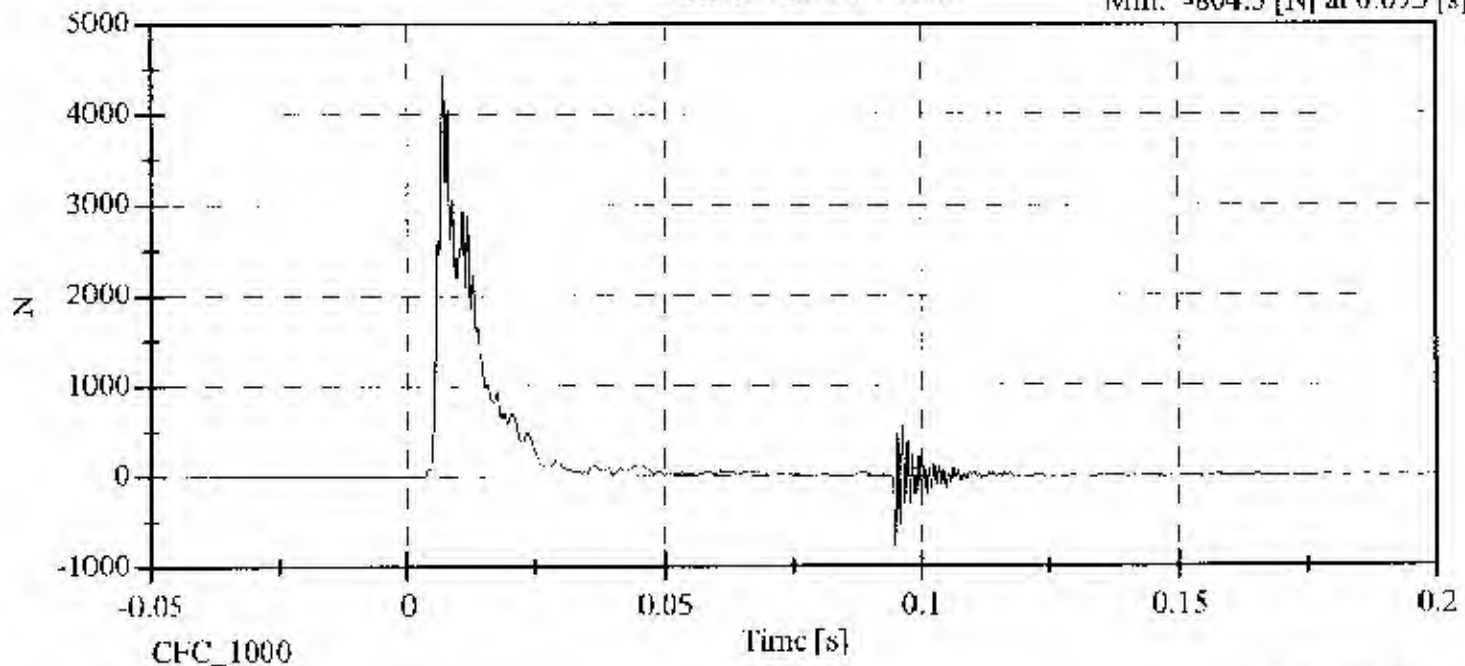
Min: -85.8 [mm] at 0.008 [s]



Shock Force vs. Time

Max: 4438.7 [N] at 0.007 [s]

Min: -804.5 [N] at 0.095 [s]



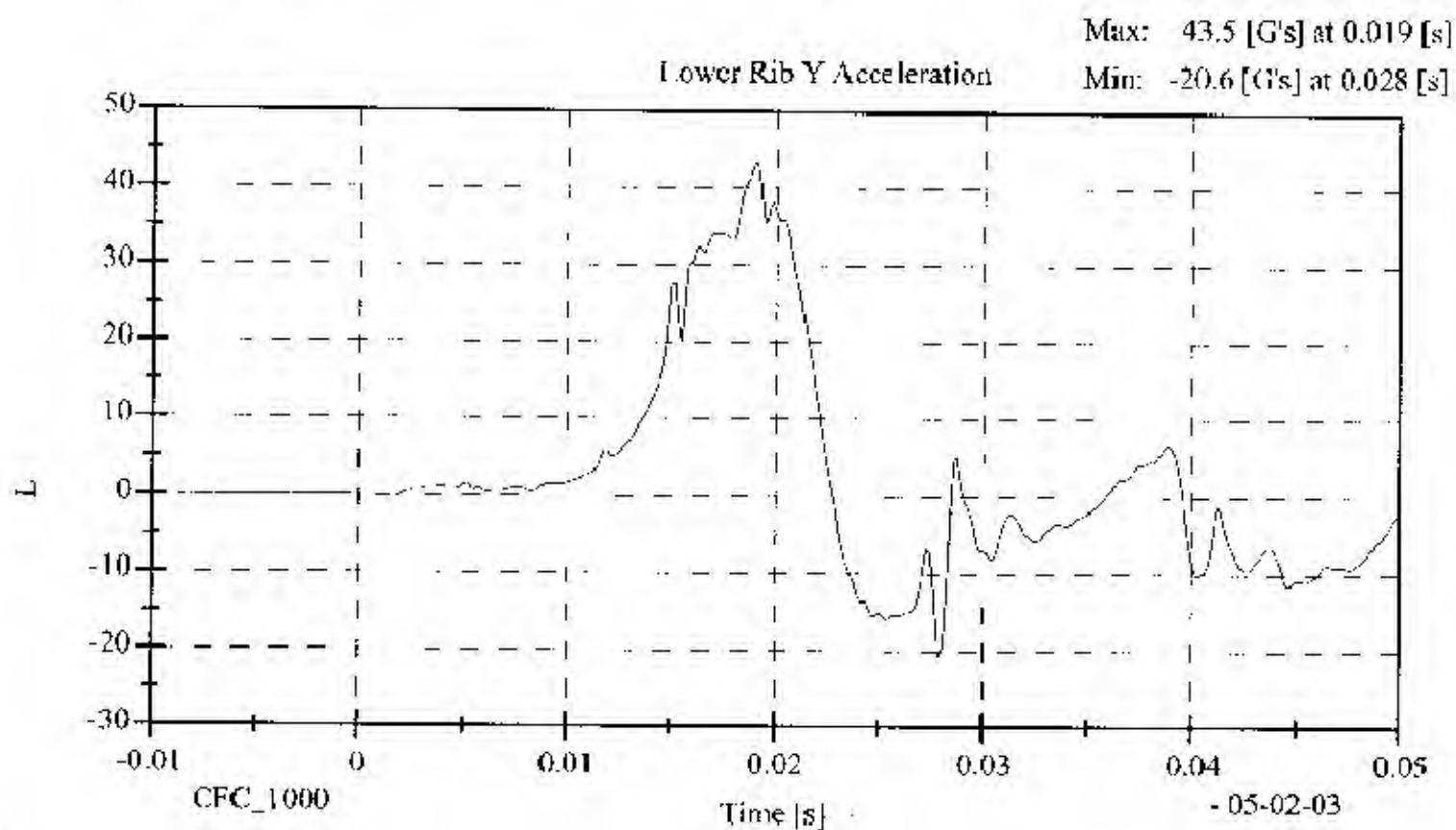
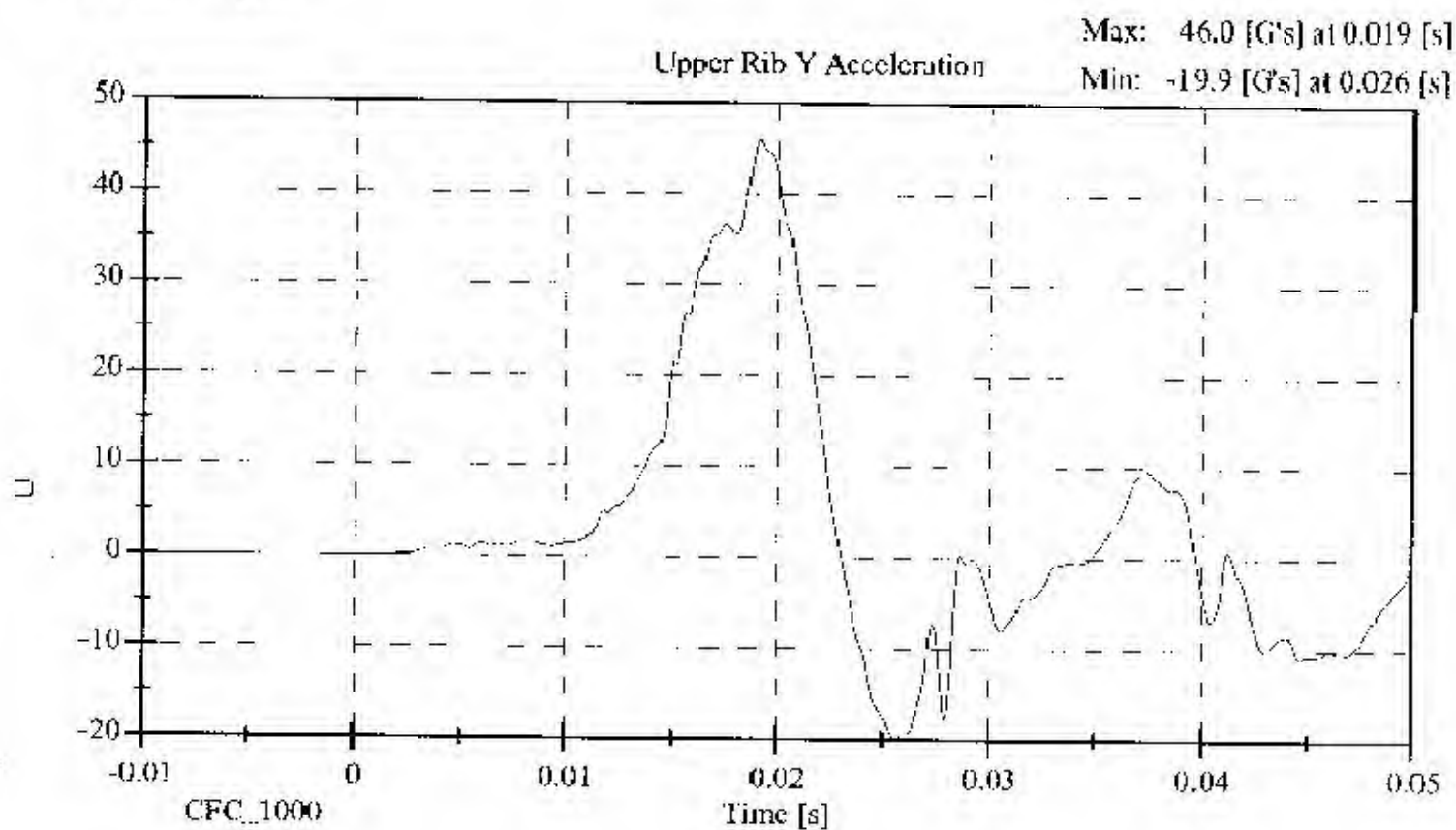
**LATERAL THORAX IMPACT TEST
PRE-TEST**

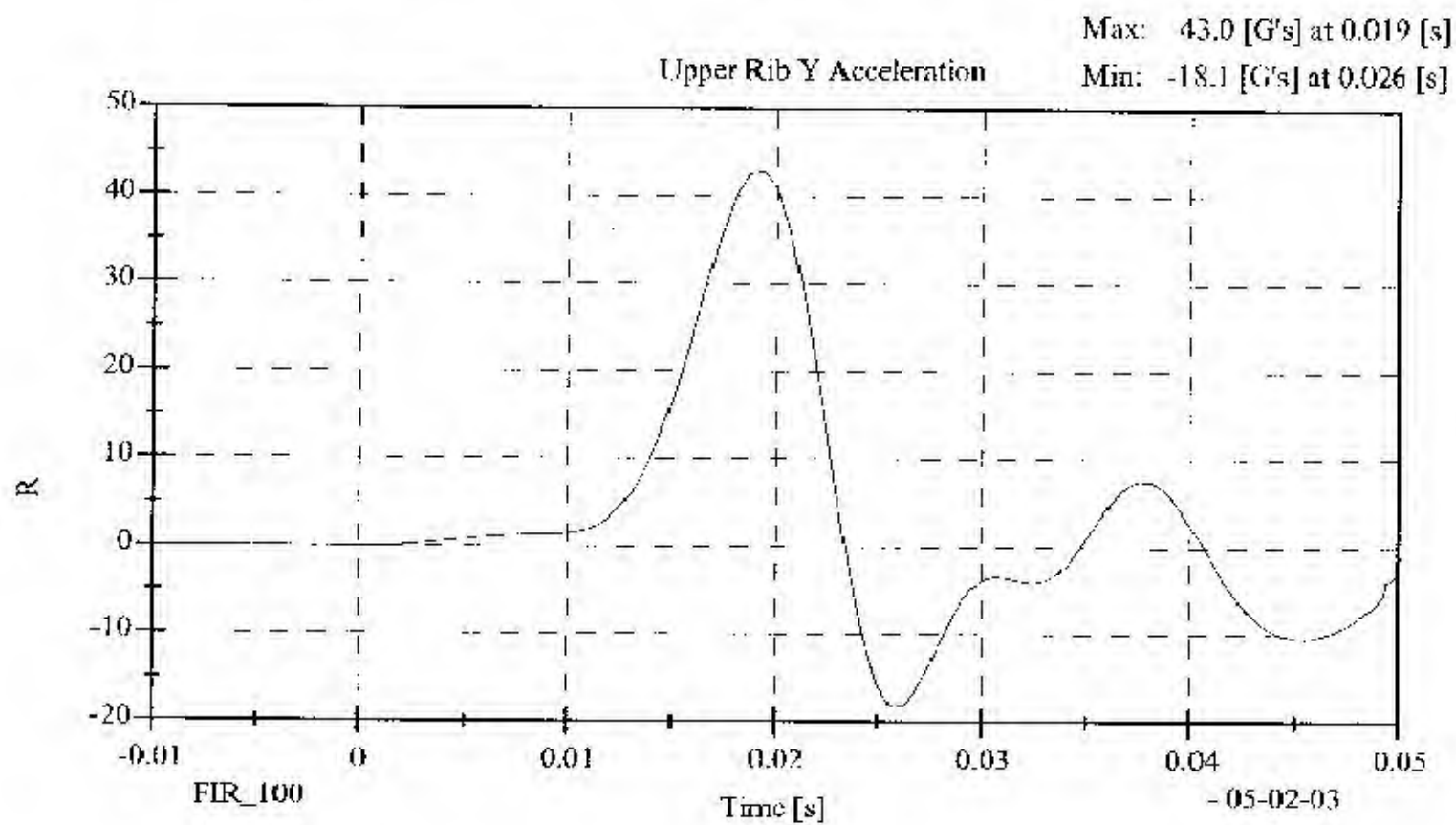
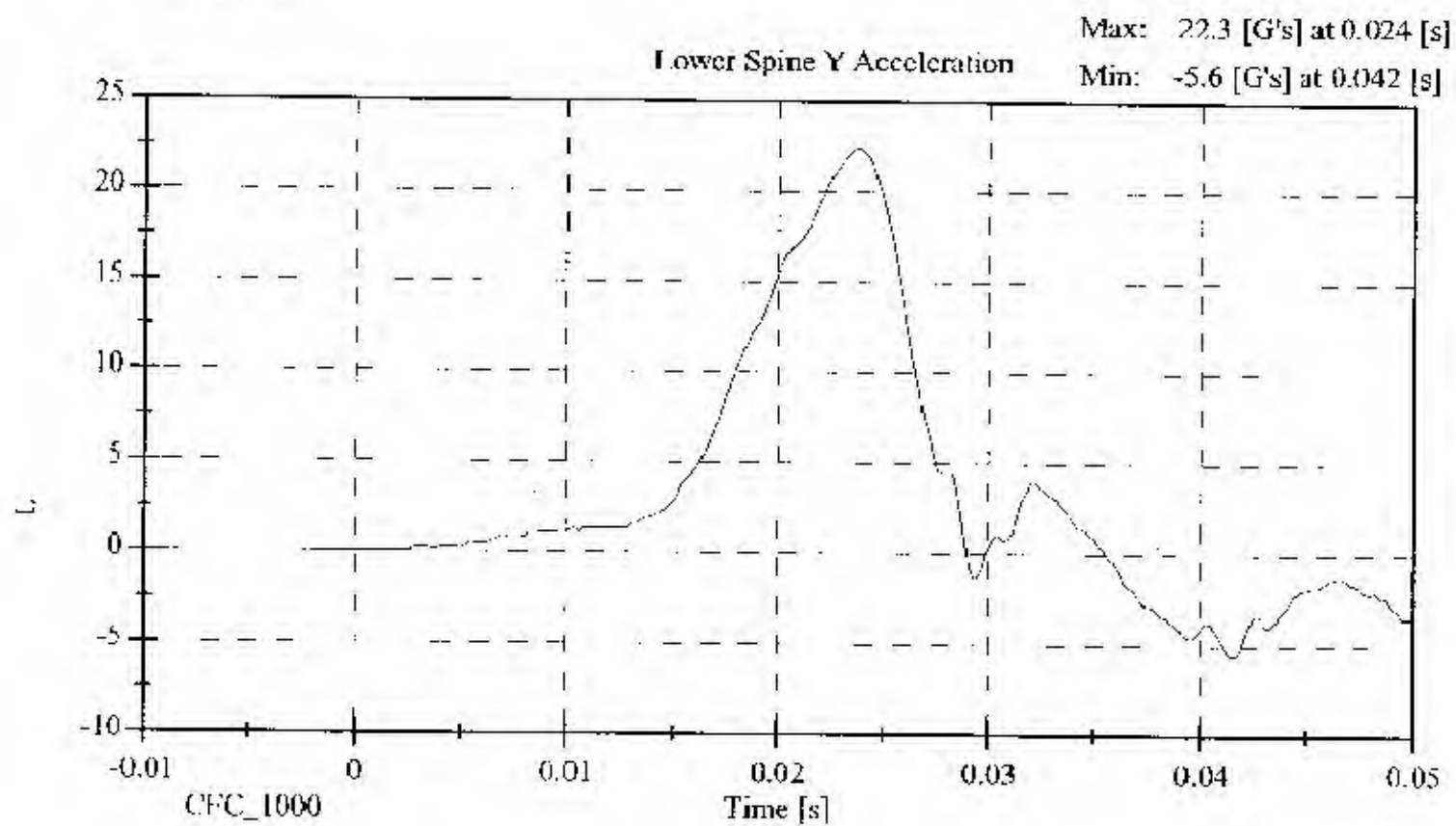
CONFIGURED FOR LEFT SIDE IMPACT

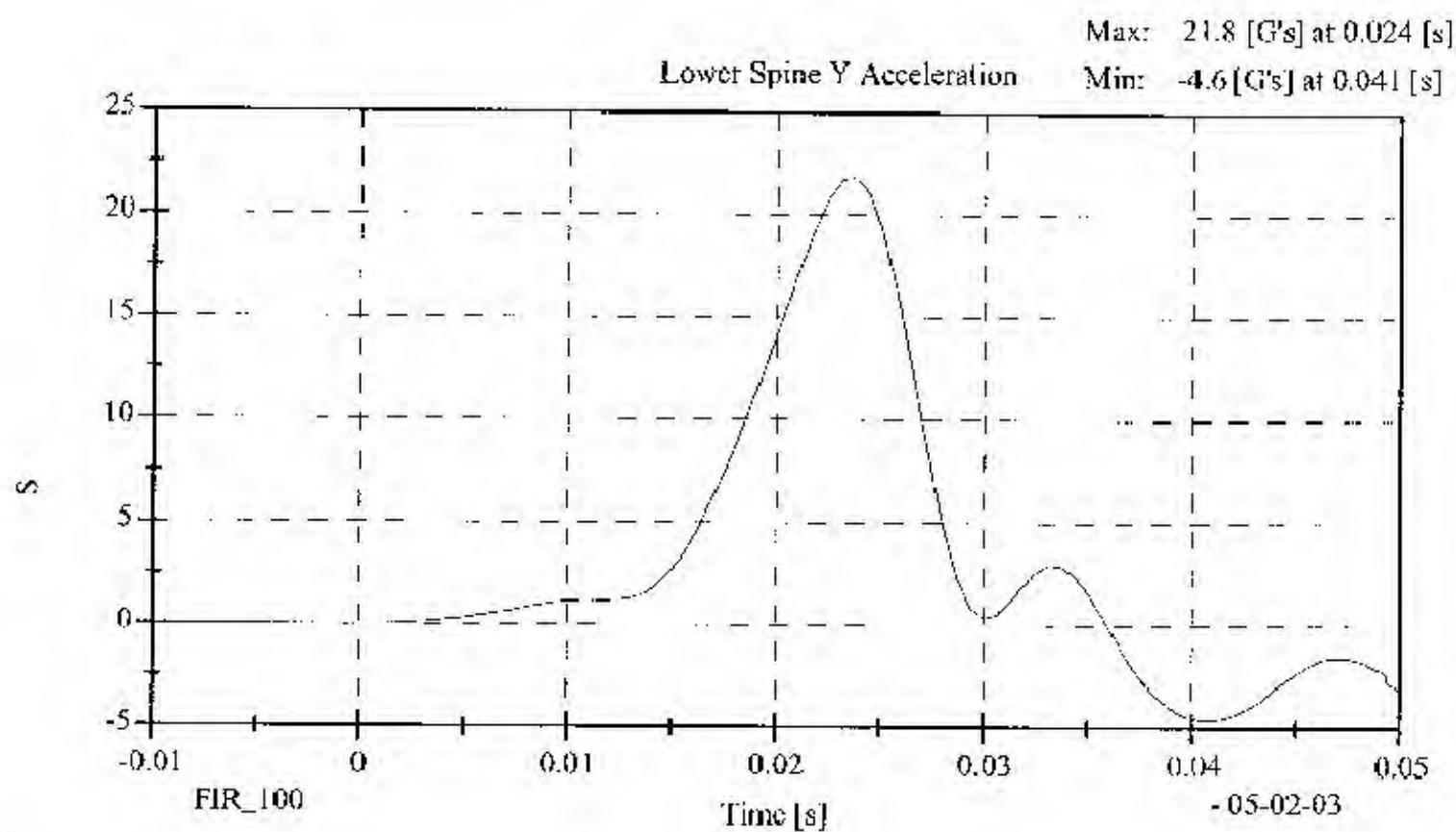
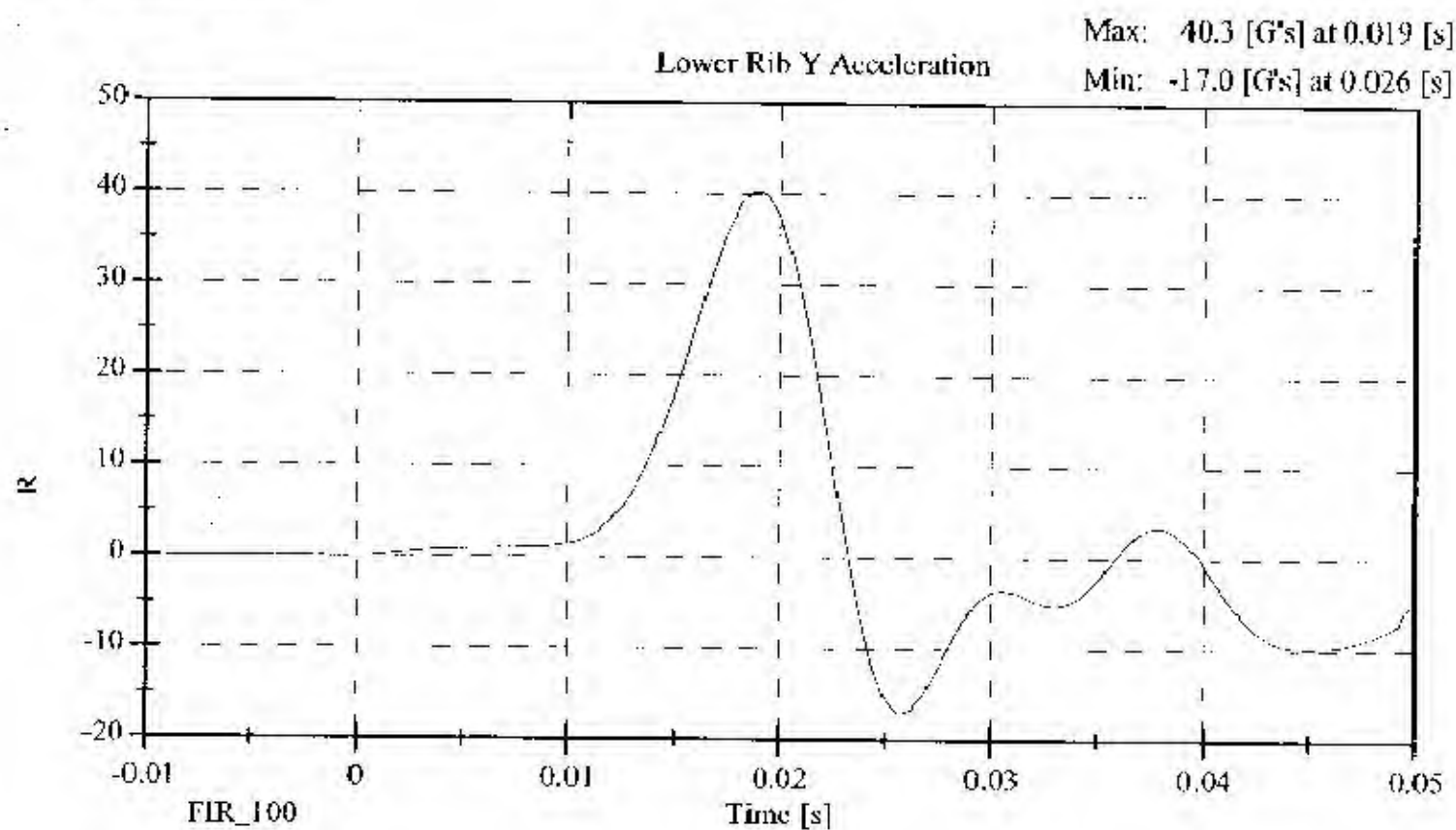
SID H3 Serial No.: 016 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swicicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	42.97
LOWER RIB (g's)	37 - 46	40.28
LOWER SPINE (g's)	15 - 22	21.81

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

Date: May 2, 2003

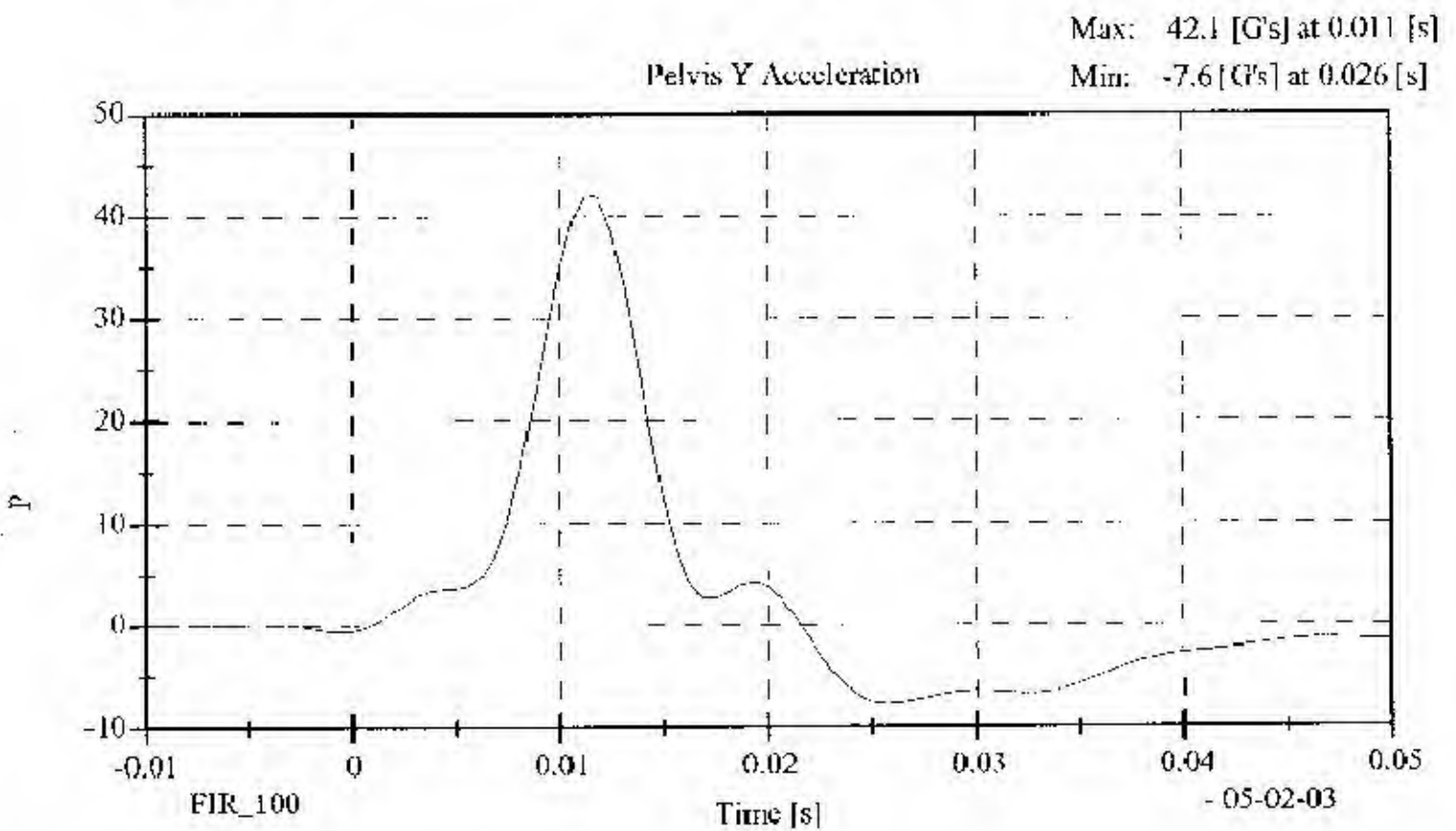
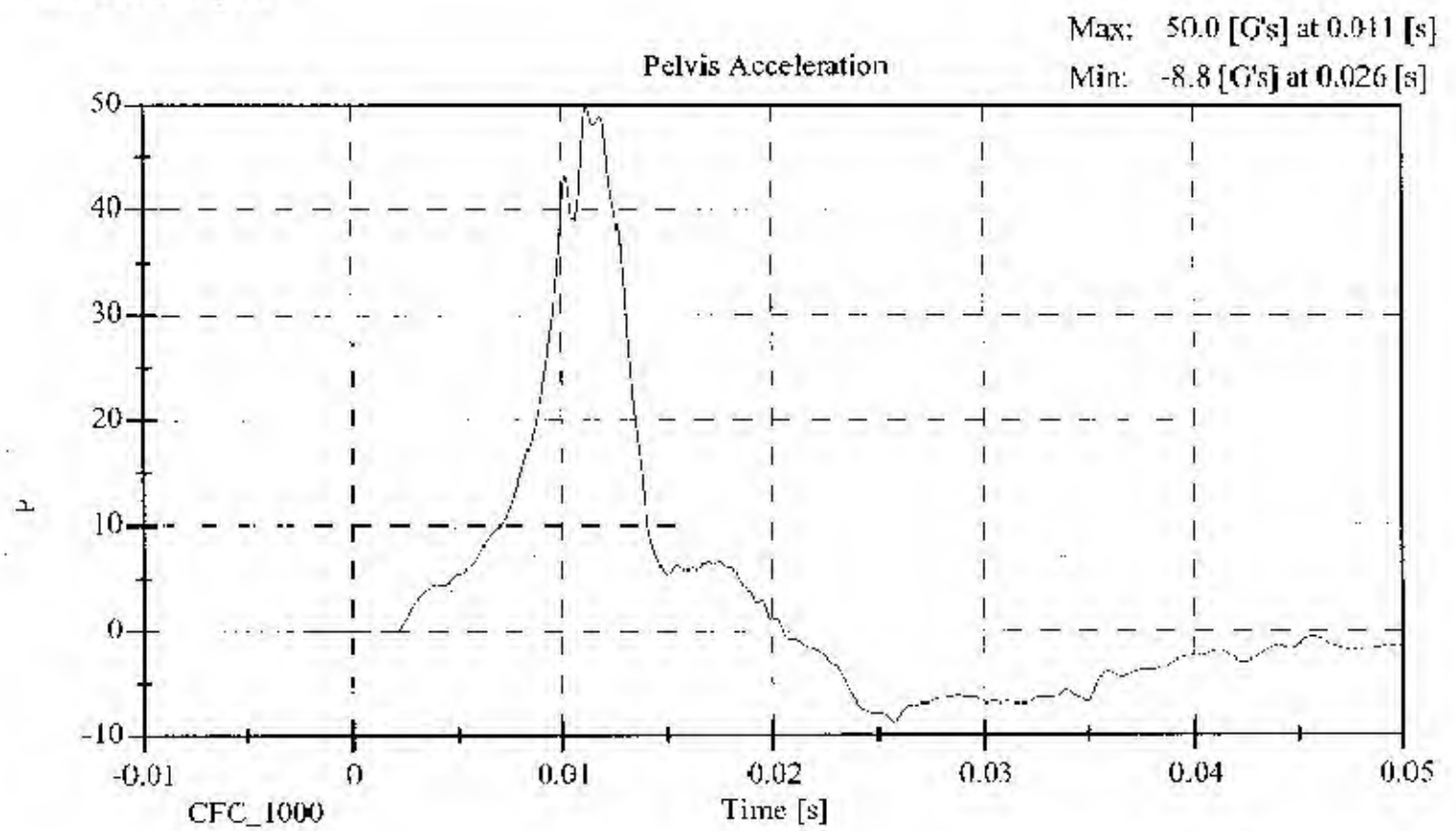
Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	42.12

REMARKS: None

016 Pelvis Impact



- 05-02-03

HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

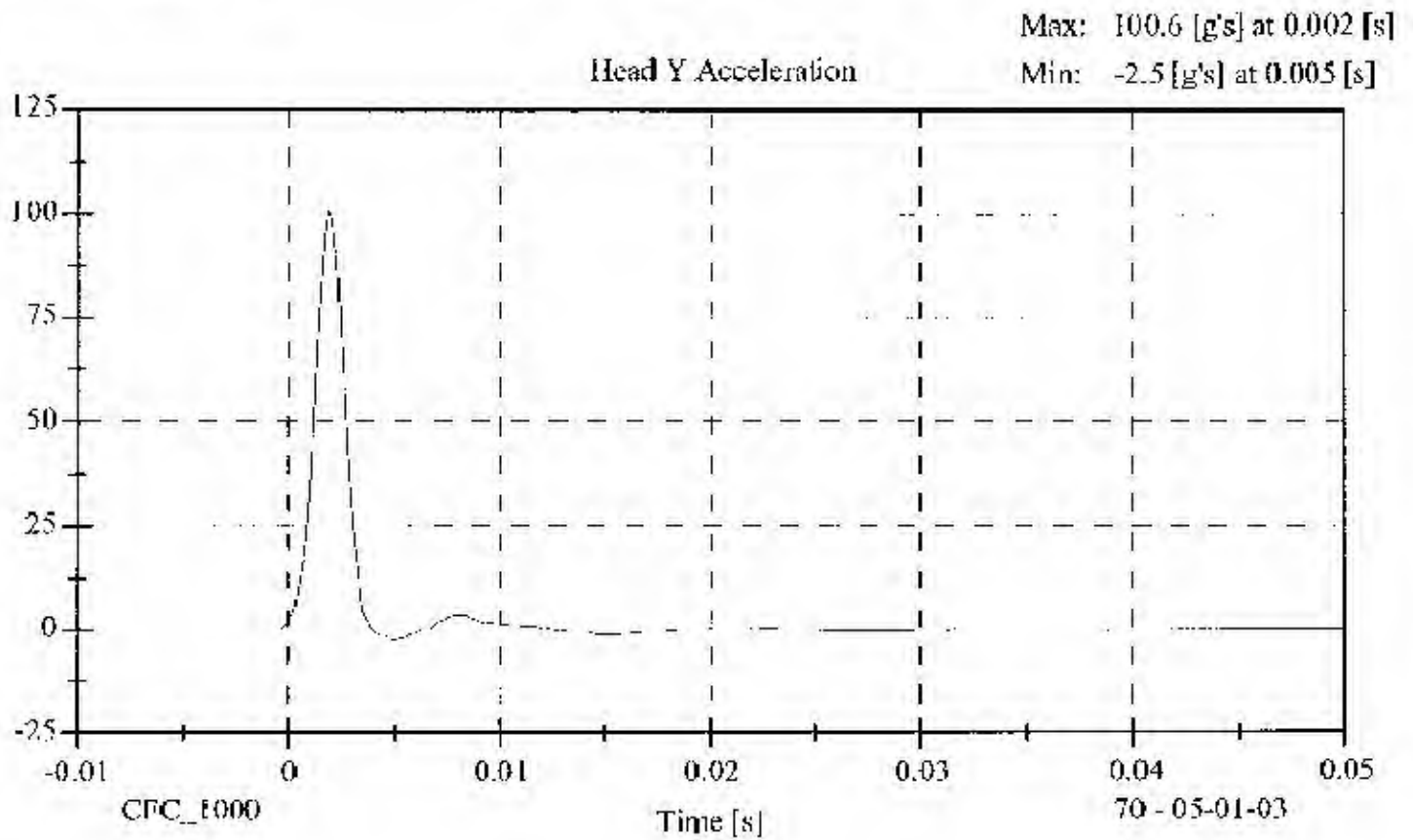
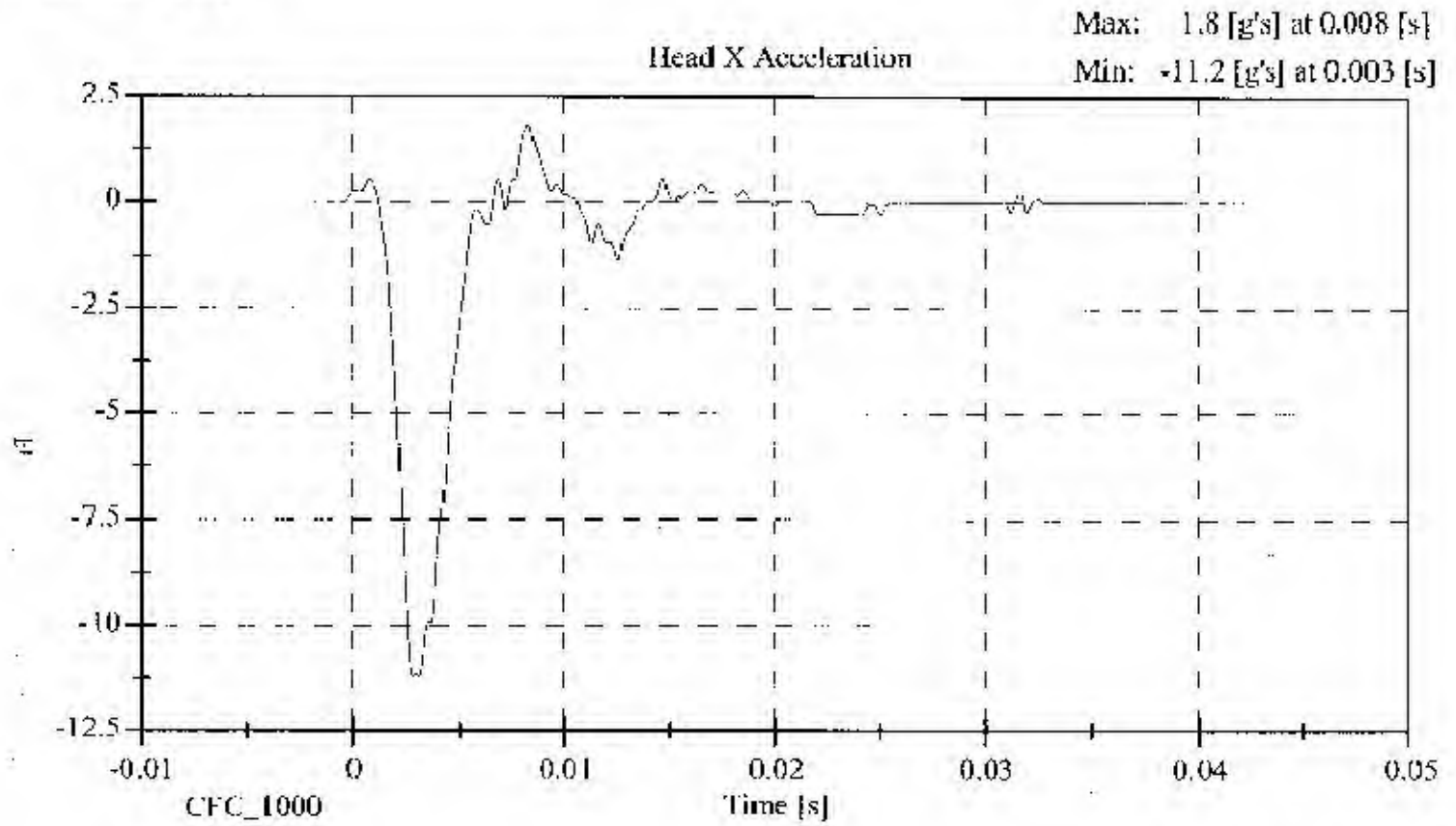
CONFIGURED FOR LEFT SIDE IMPACT

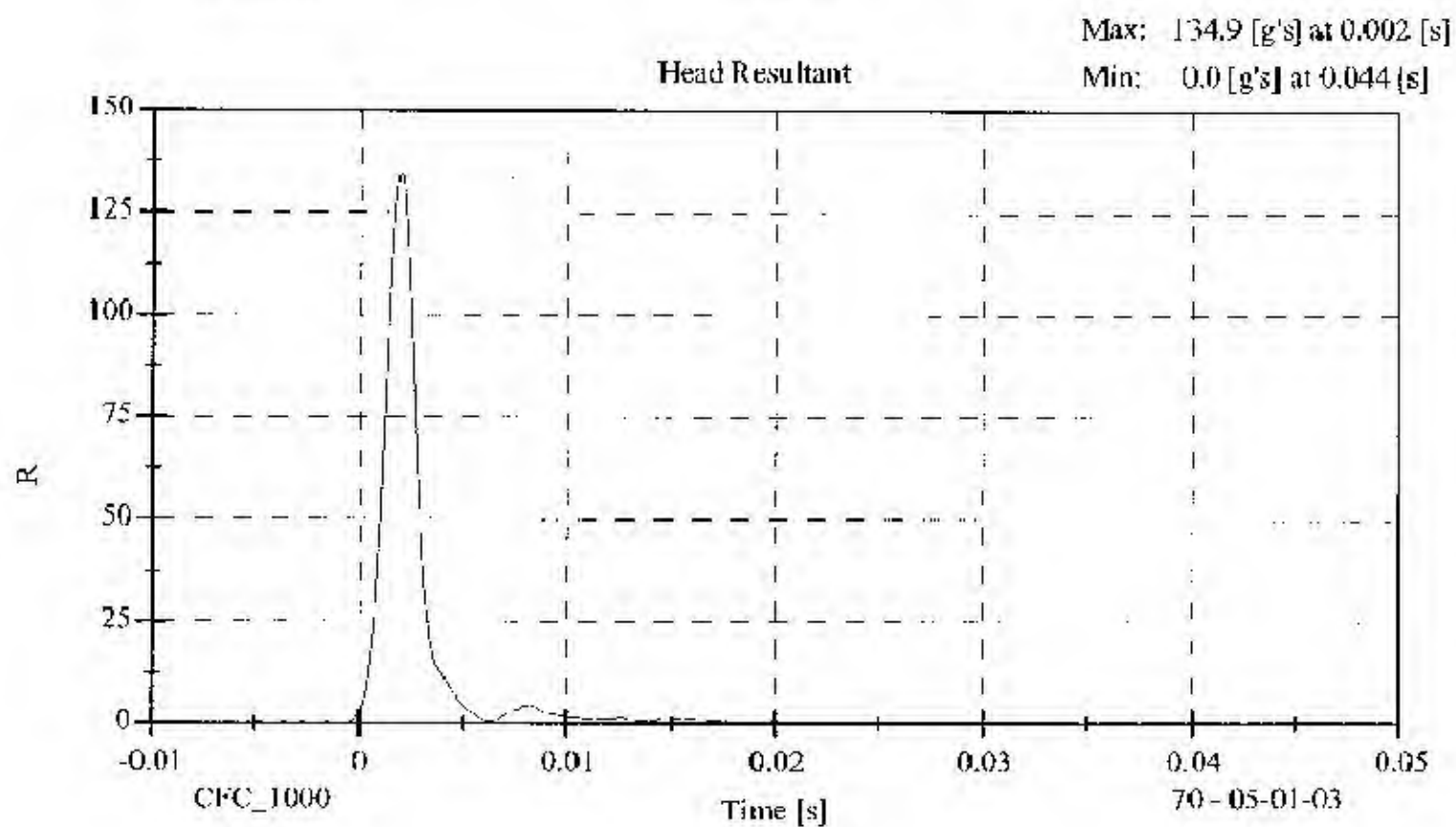
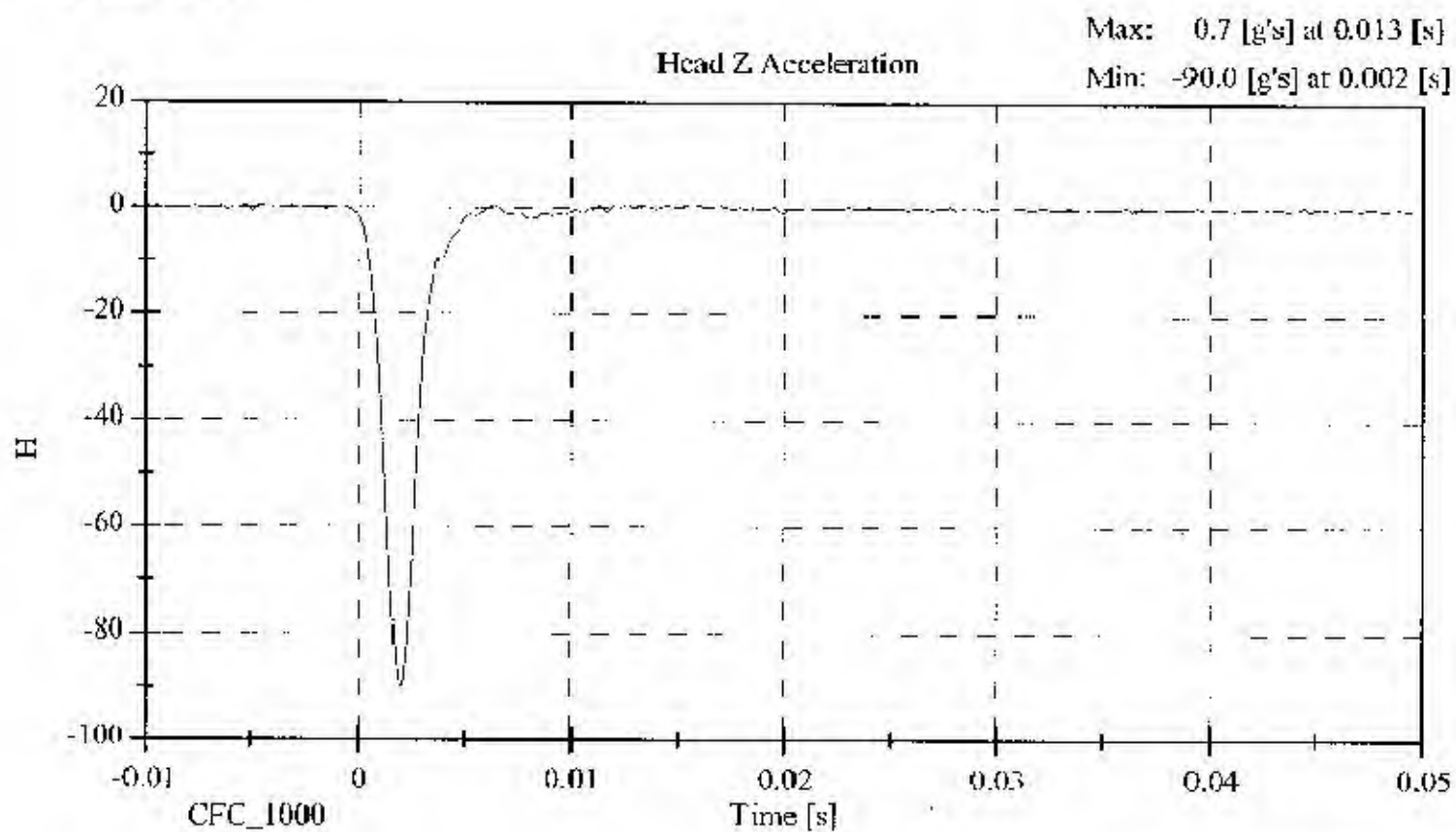
SID Serial No.: 016 Sequential Test Number: 2
Date: May 1, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	41.0
PEAK RESULTANT ACCELERATION (Gs)	120 - 150	134.95
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	1.85
CURVE PERCENT NONMODAL (%)	< 15	3.36

REMARKS: None

016 Head Drop





**LATERAL NECK BENDING TEST
PRE-TEST**

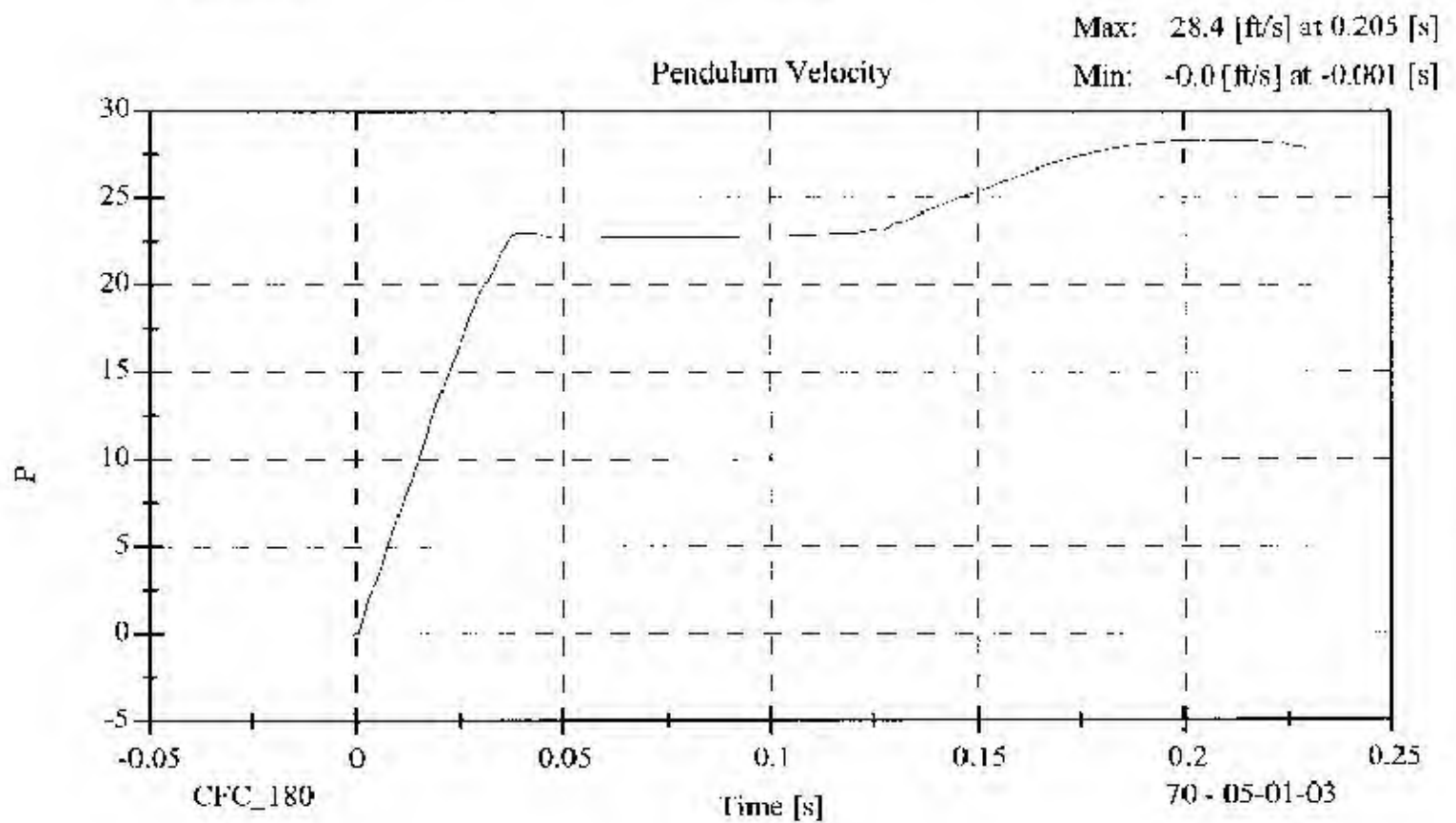
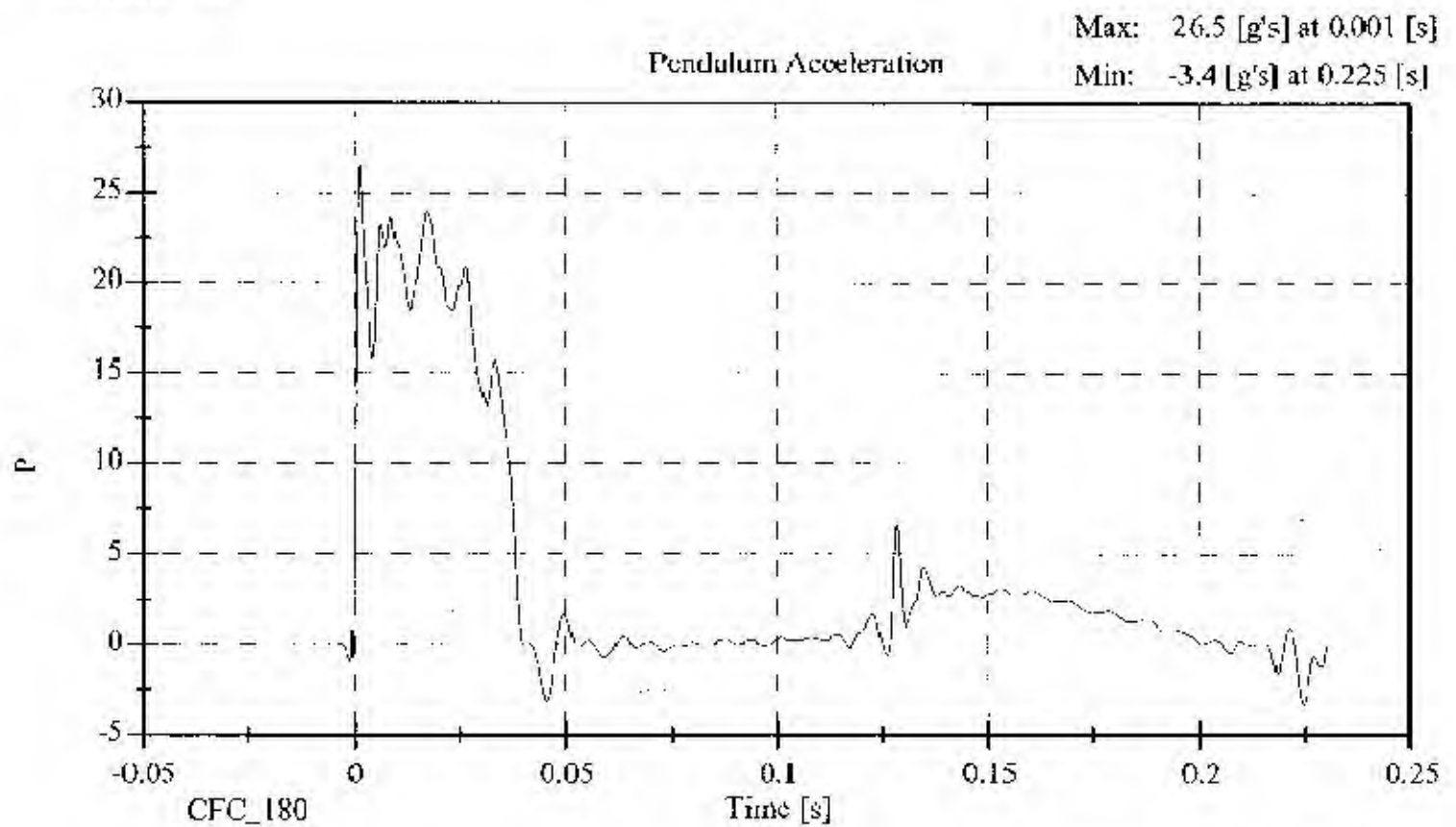
(Test not required for SID certification)

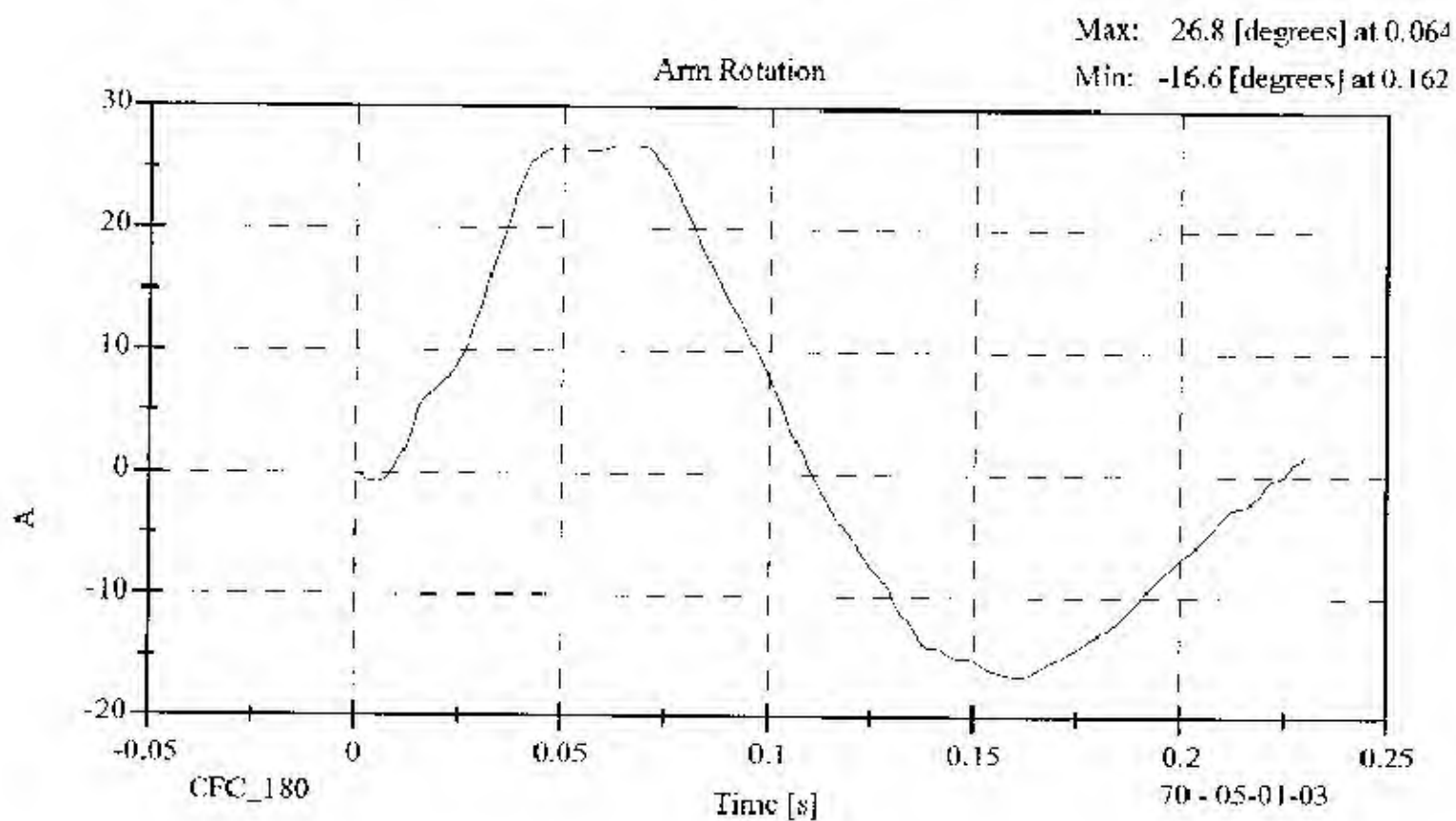
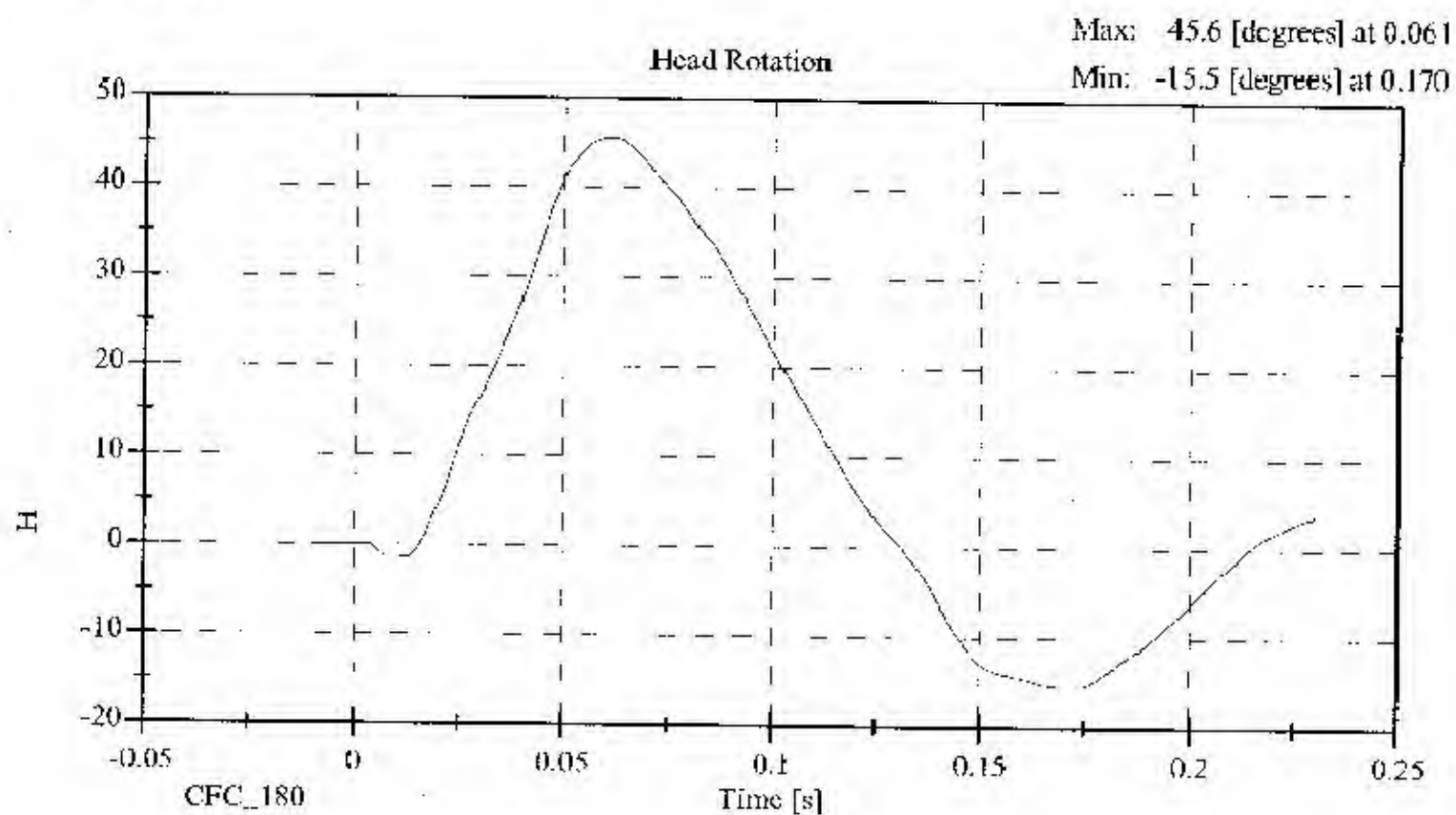
CONFIGURED FOR LEFT SIDE IMPACT

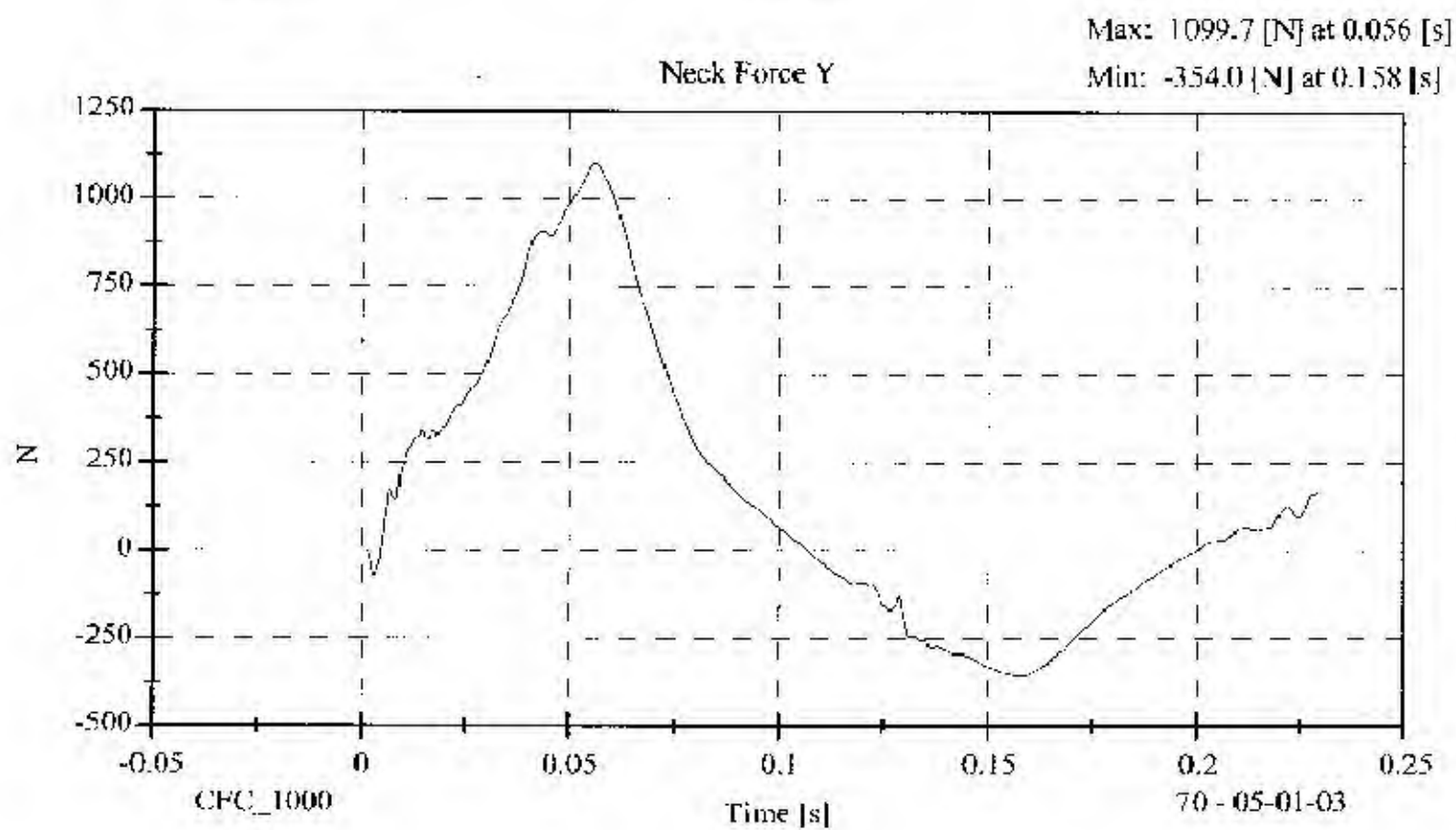
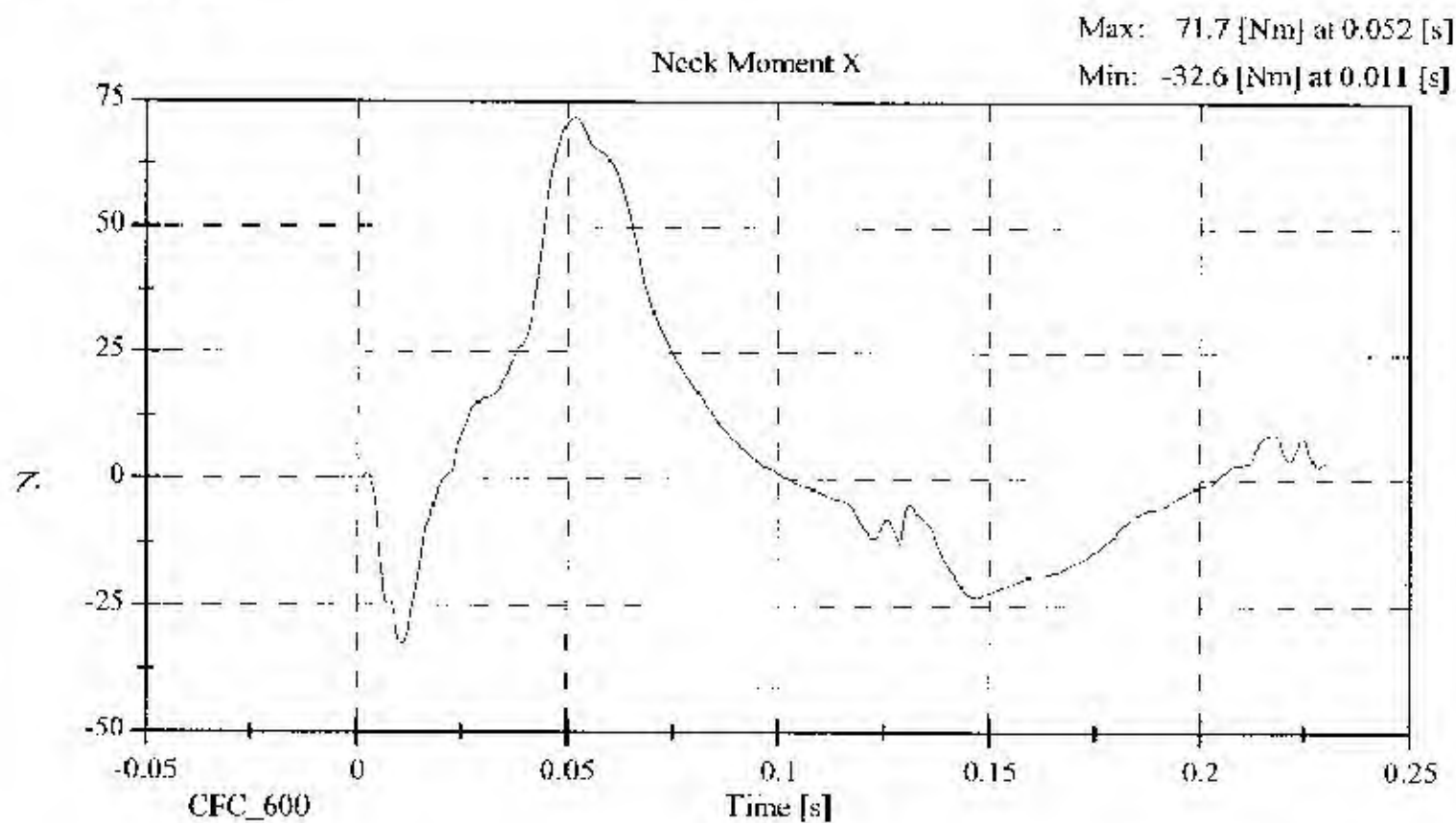
SID Serial No.: 016 Sequential Test Number: 2
Date: May 1, 2003 Laboratory Technician: B. Swiecicki

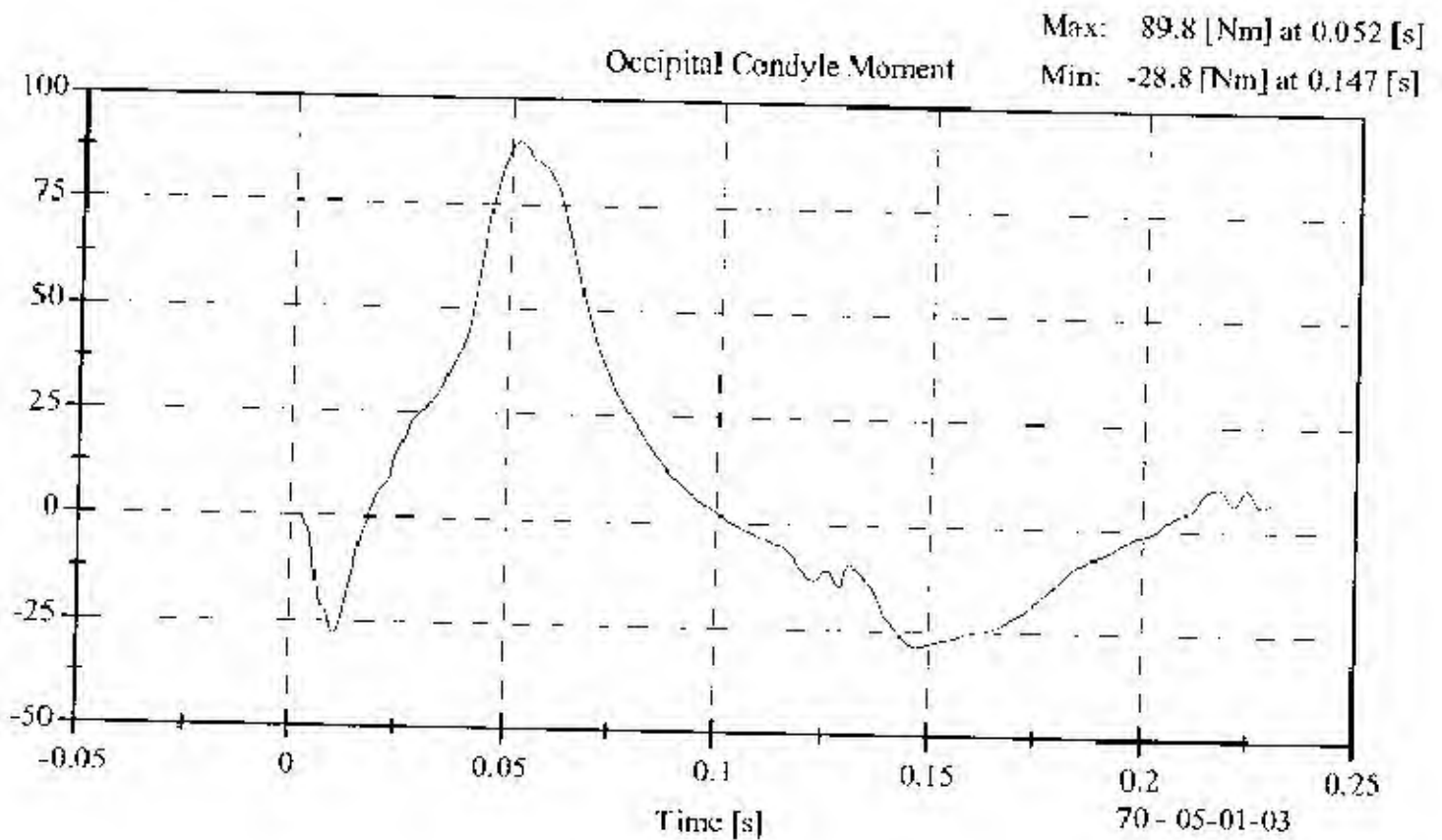
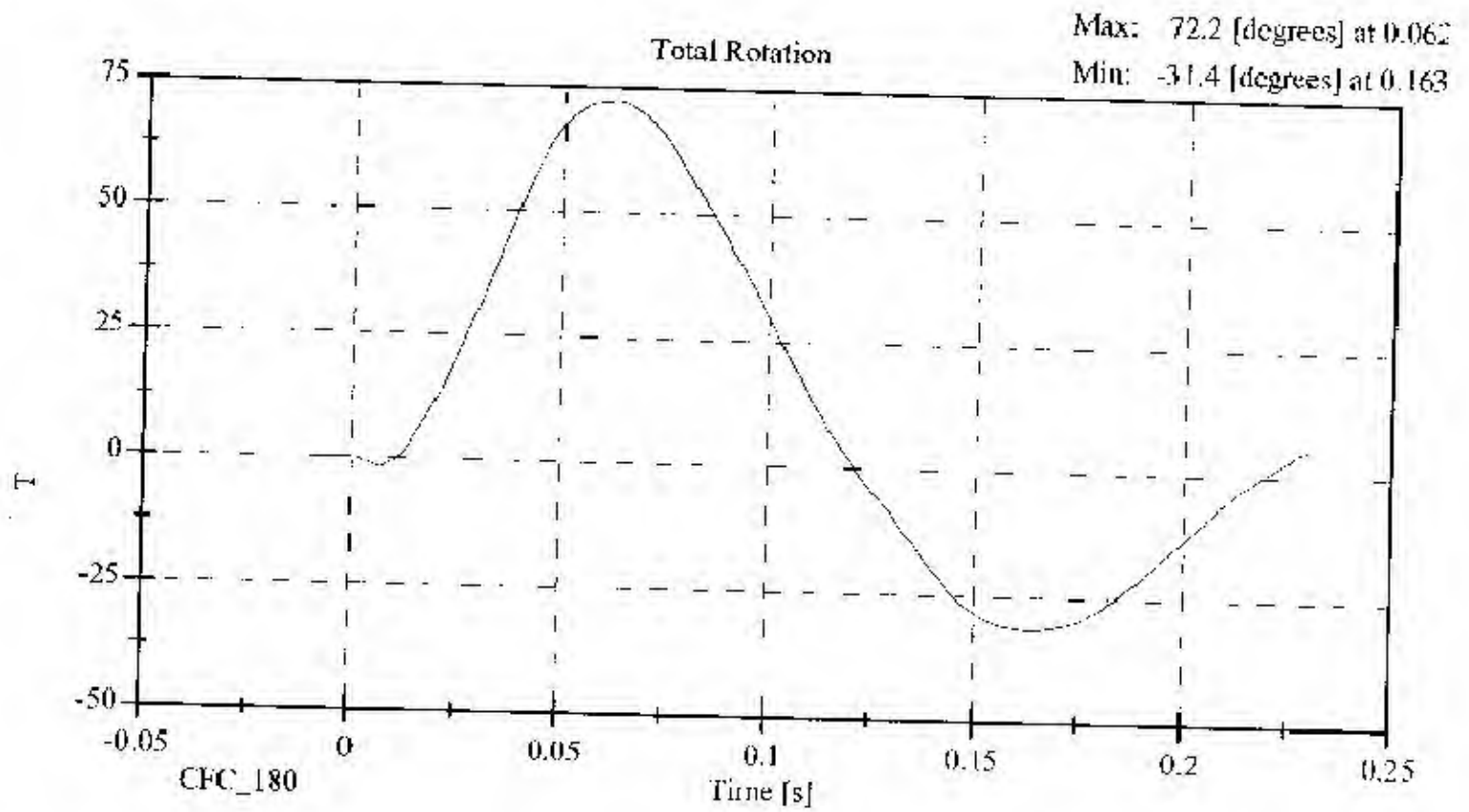
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.97
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.05
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.13
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.00
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.01
D PLANE ROTATION		
MAXIMUM ROTATION (deg.)	64 - 78	72.21
ROT. ANGLE TIME to ZERO (ms)	50 - 70	58.60
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	89.83
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	51.70
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	10.40

REMARKS: None









**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	57.0
FORCE @ 13 mm (N)	104 - 162	118.3
FORCE @ 19 mm (N)	163 - 221	186.8
FORCE @ 25 mm (N)	222 - 280	259.6
FORCE @ 33 mm (N)	325 - 391	361.2

REMARKS: None

Dummy S/N 016

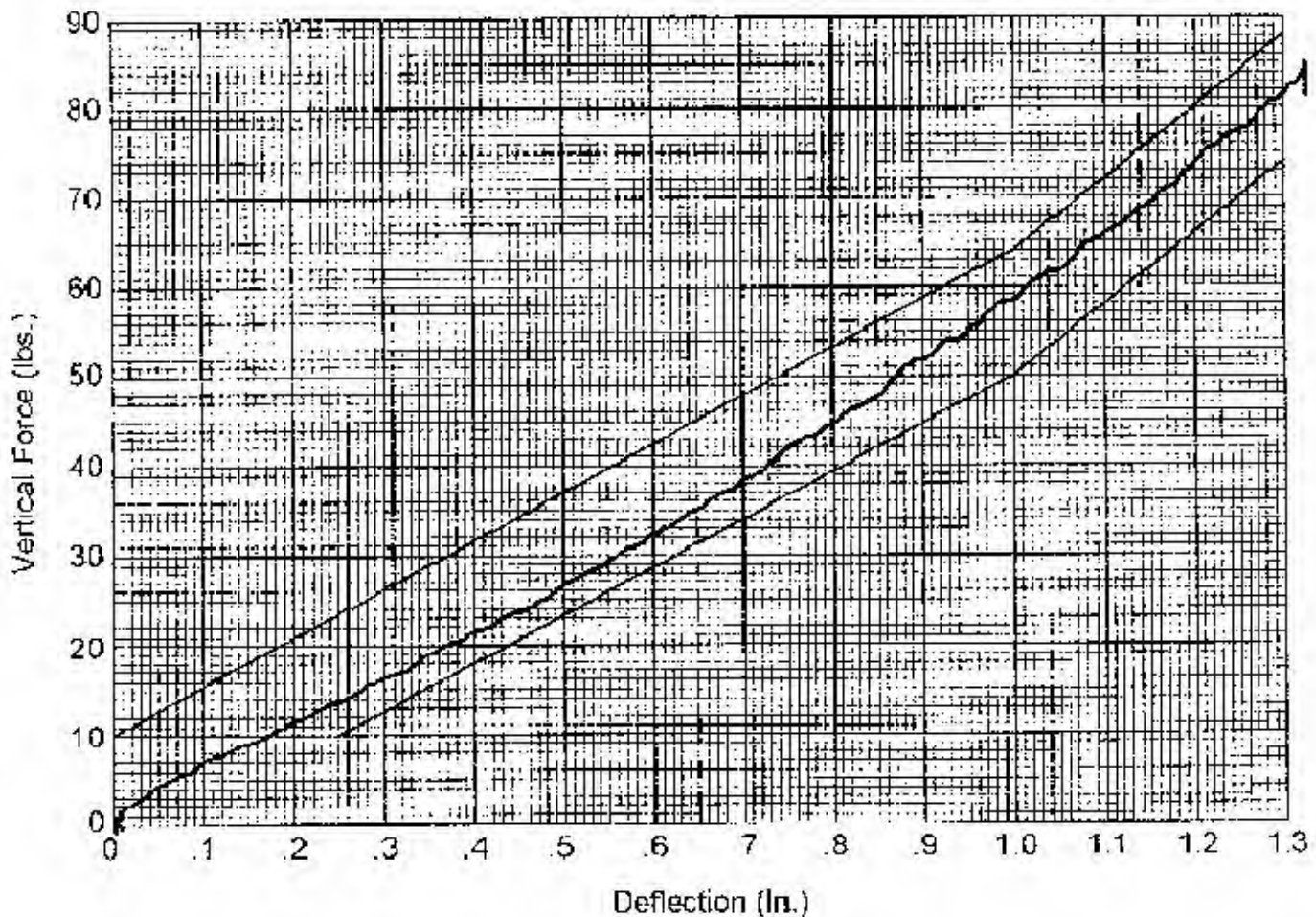
W/A _____

Date 5-02-03

Performed By [Signature]

Temp. 75

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number: 2

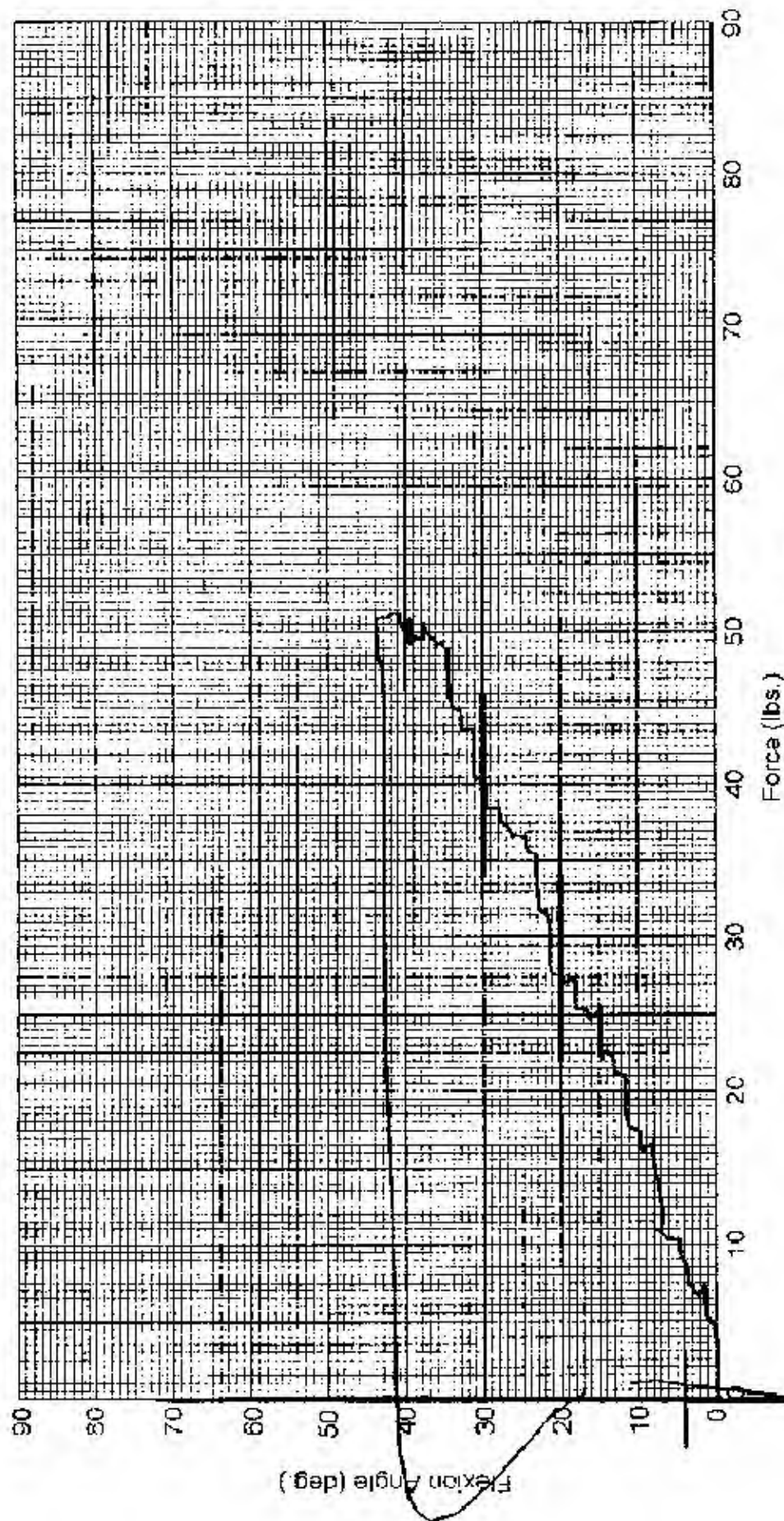
Date: May 2, 2003

Laboratory Technician: B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	121.9
FORCE @ 30° (N)	151.2 - 204.6	178.8
FORCE @ 40° (N)	204.6 - 258	223.7
RETURN ANGLE	12° max.	4°

REMARKS: None

Dummy S/N 016
 WIA
 Date 5-03-03
 Performed By [Signature]
 Temp. 70°
 Humidity 32%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 2
 Date: May 2, 2003 Laboratory Technician: B. Swieczki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PCLVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	

REMARKS: None

CALIBRATION TEST RESULTS
POST TEST

SID H3 NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

3

Date: May 9, 2003

Laboratory Technician:

R. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

**LATERAL THORAX IMPACT TEST
POST TEST**

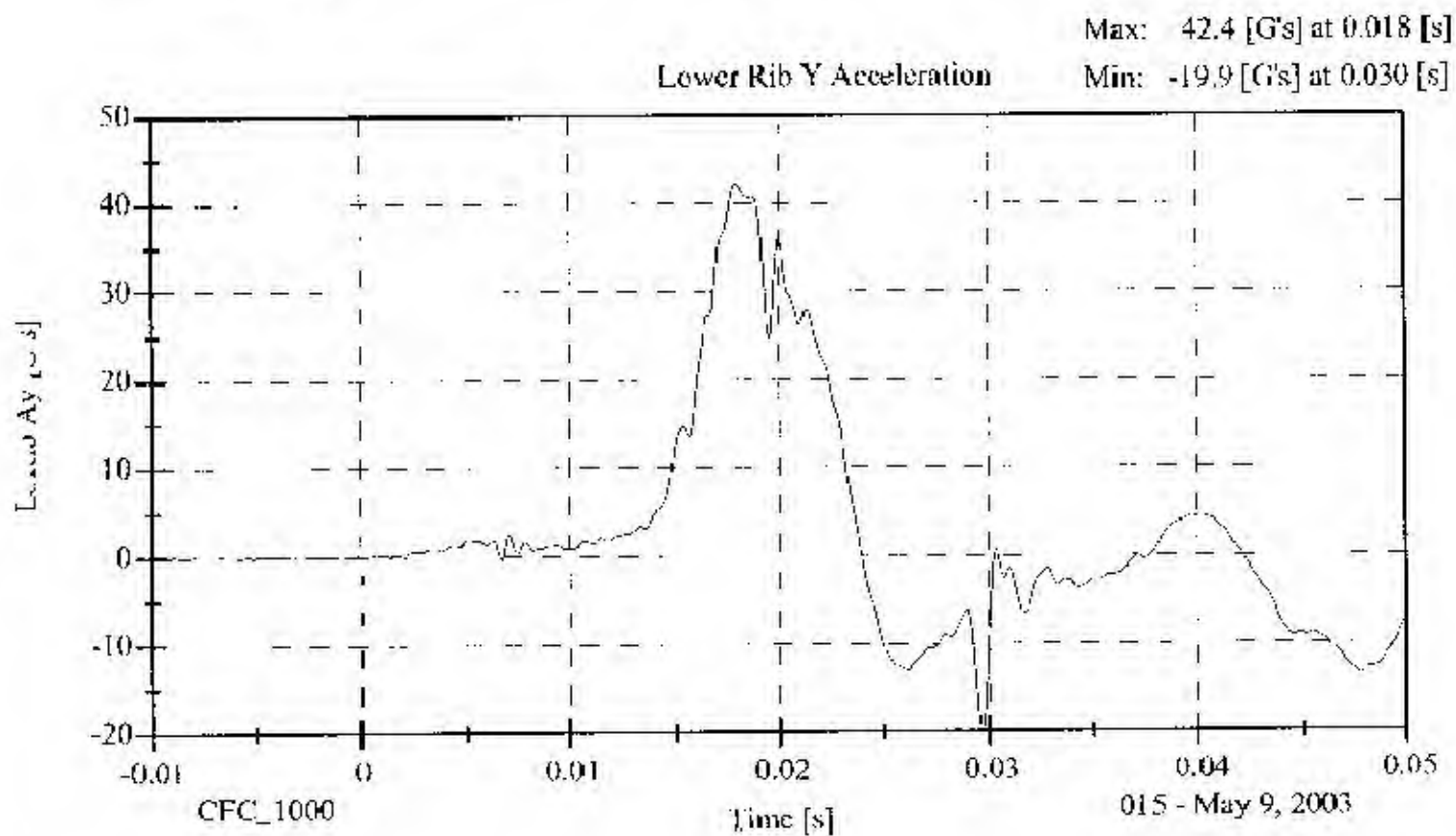
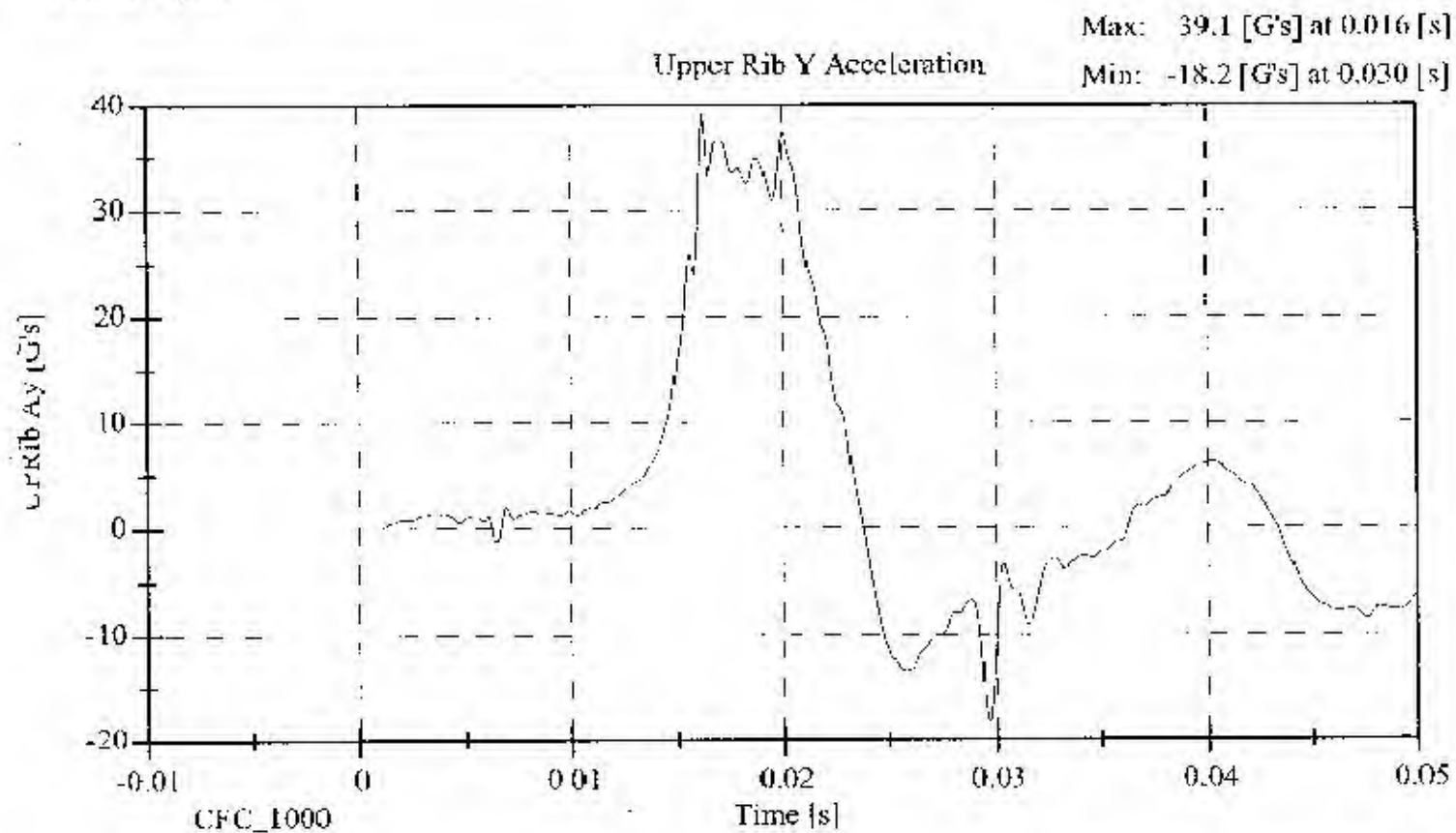
CONFIGURED FOR LEFT SIDE IMPACT

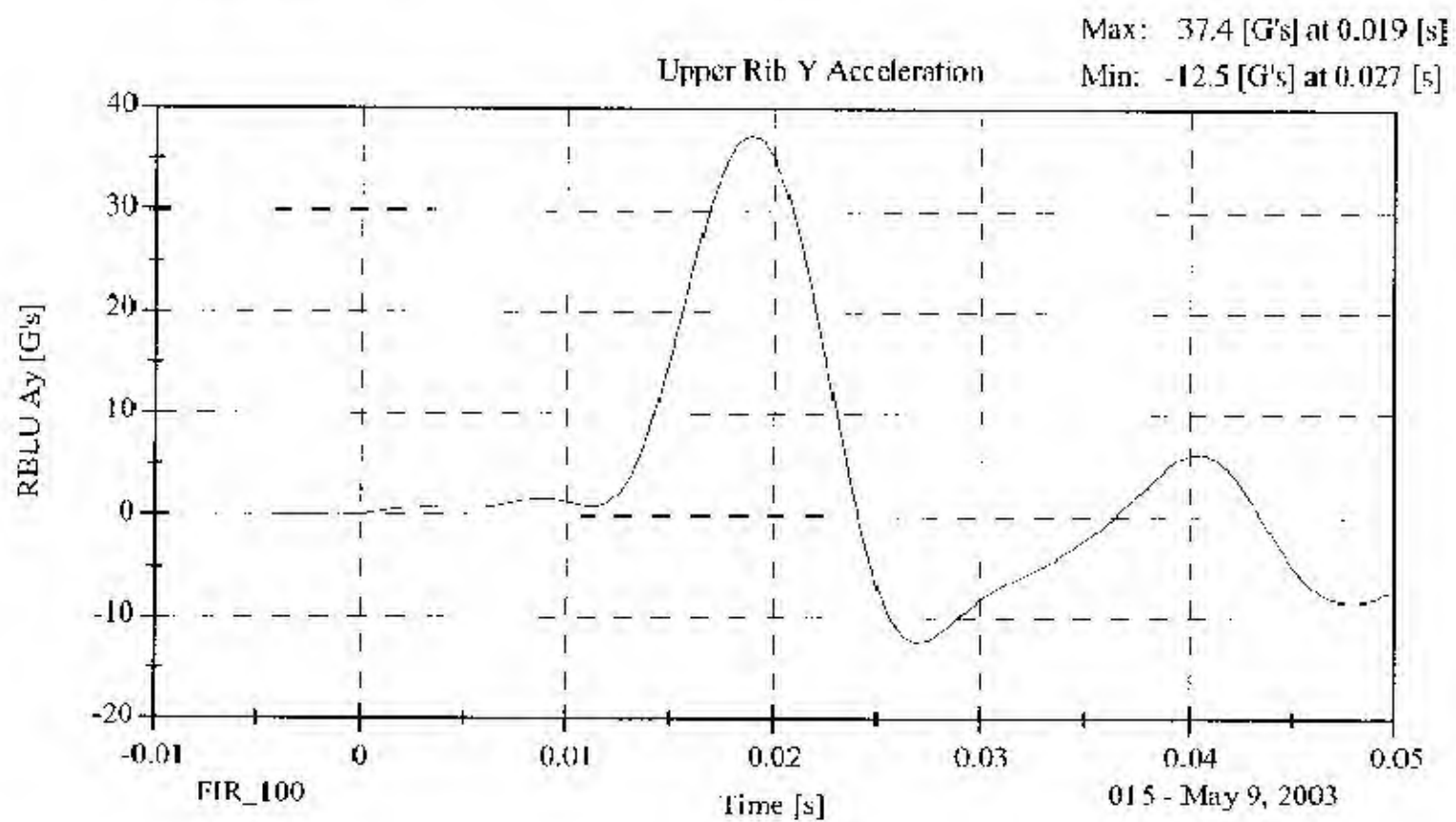
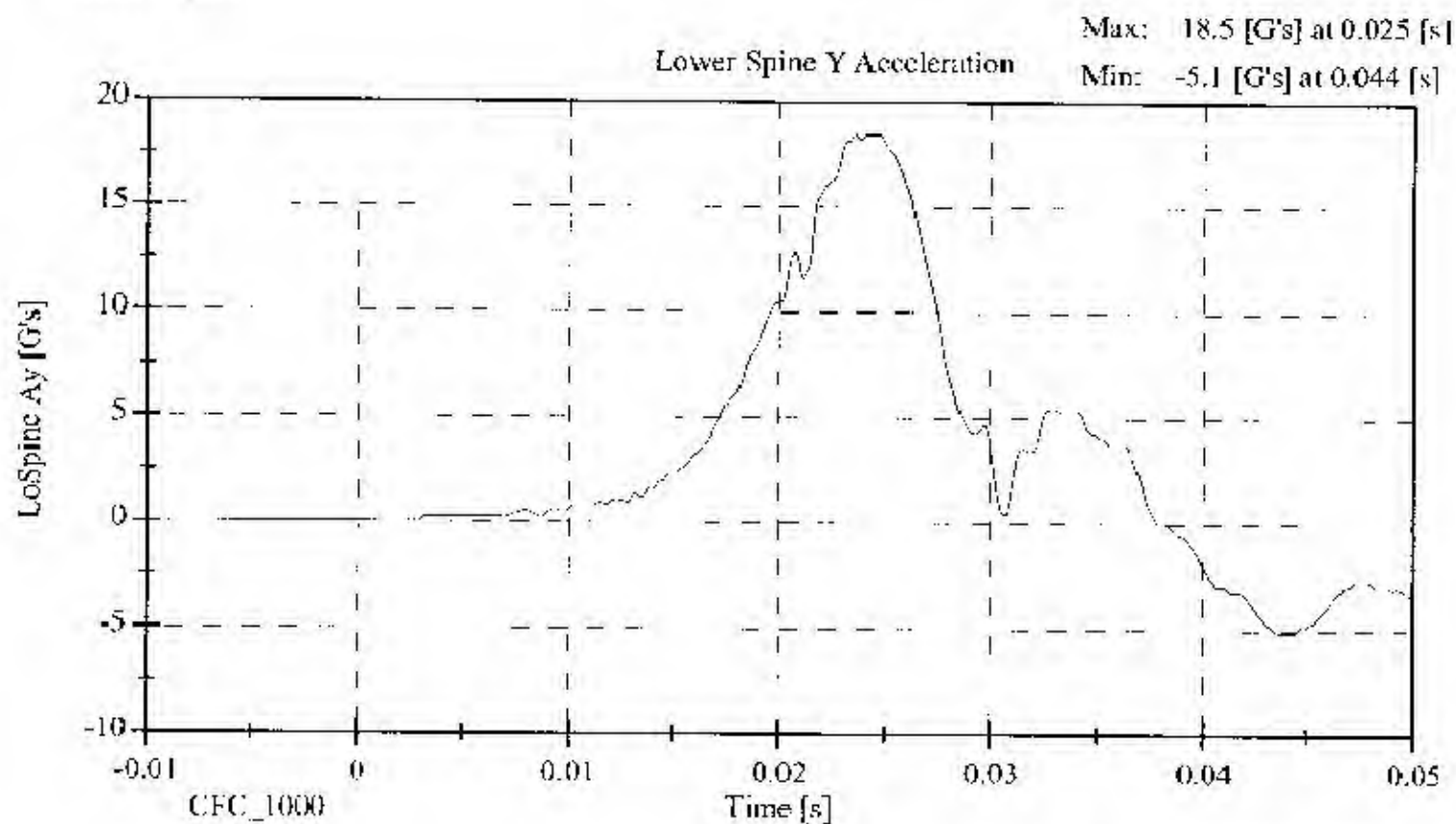
SID 03 Serial No.: 015 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.27
UPPER RIB (g's)	37 - 46	37.43
LOWER RIB (g's)	37 - 46	38.17
LOWER SPINE (g's)	15 - 22	18.55

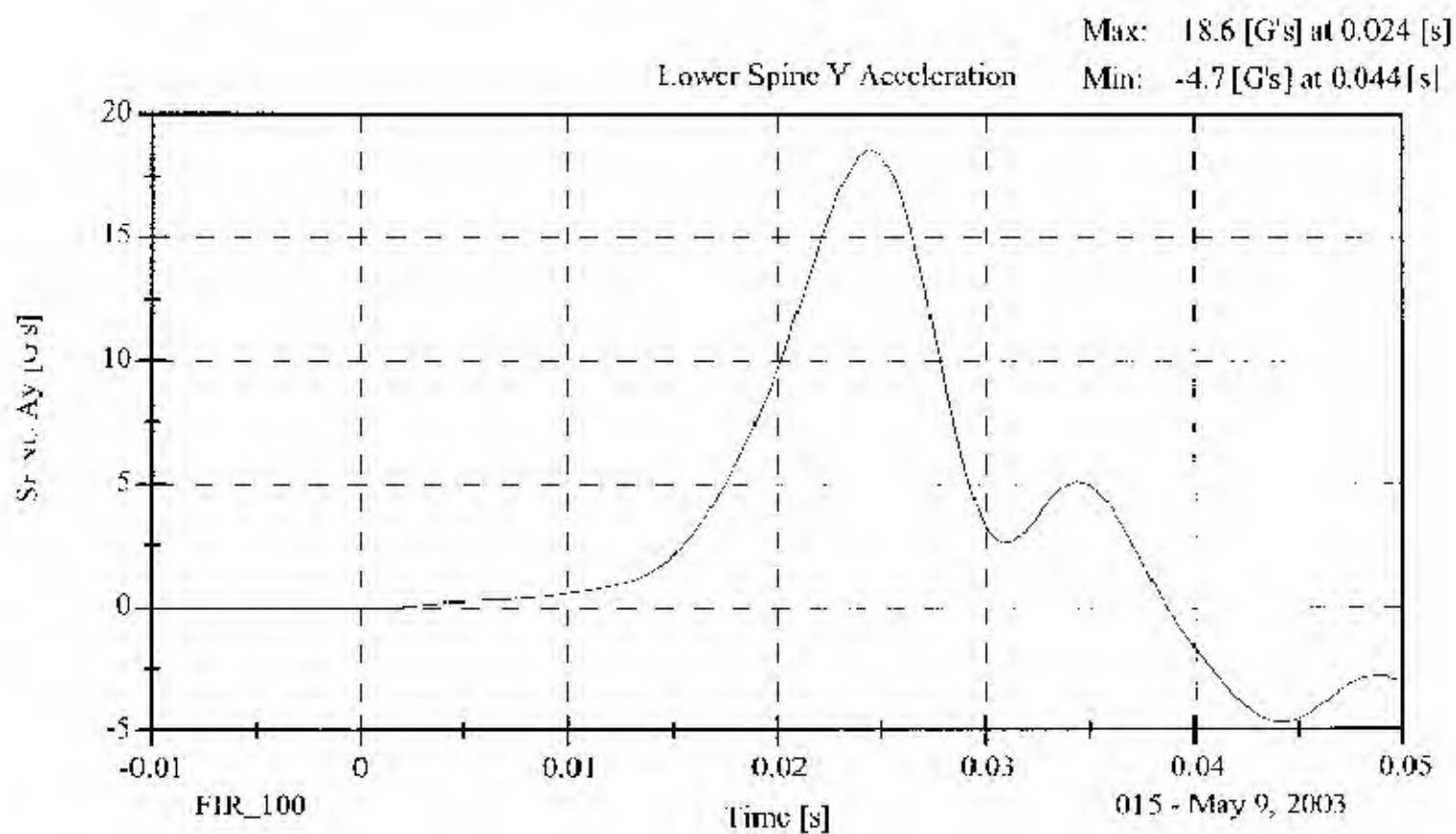
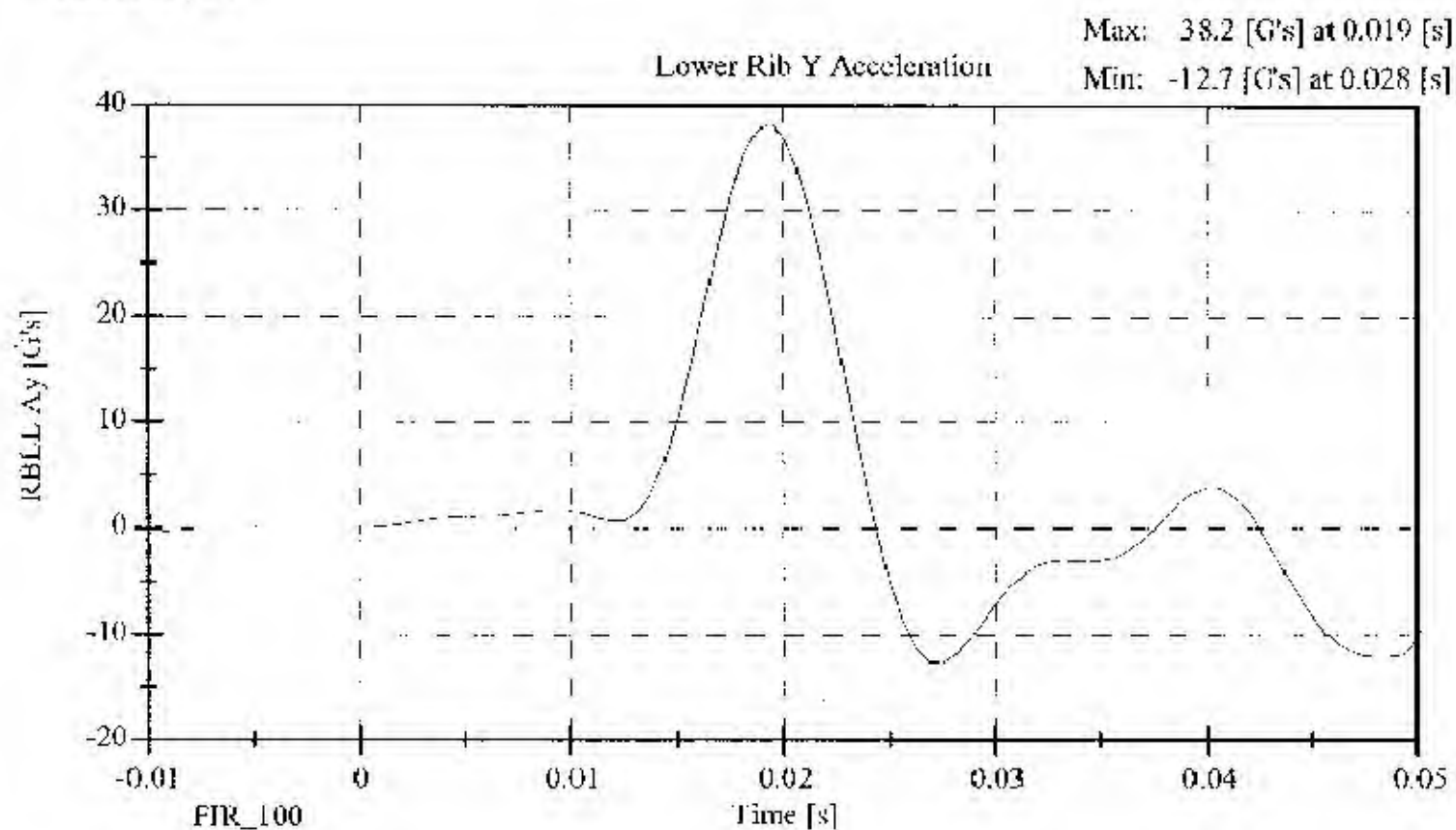
REMARKS: None

Thorax Impact





015 - May 9, 2003



**LATERAL PELVIS IMPACT TEST
POST TEST**

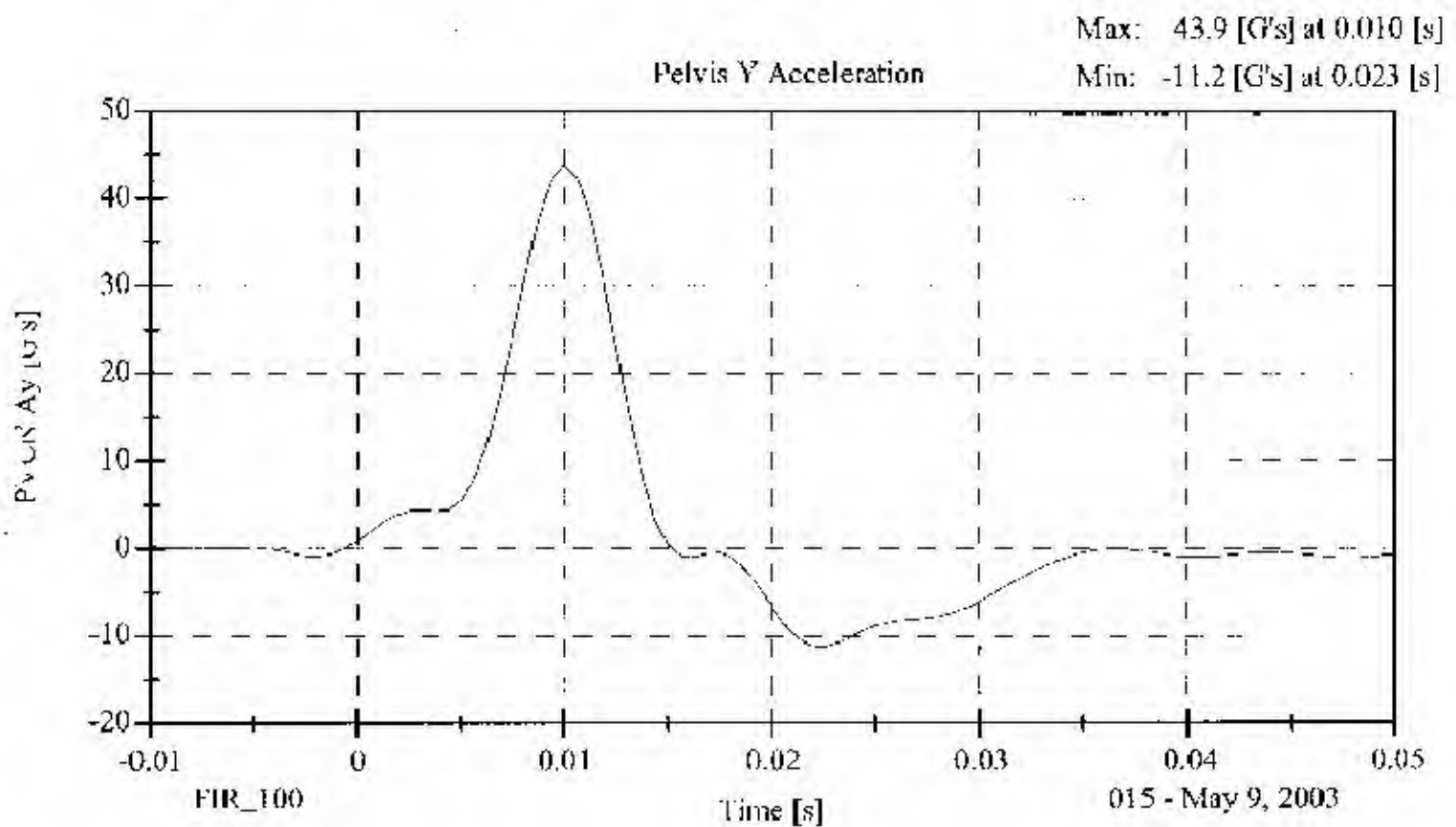
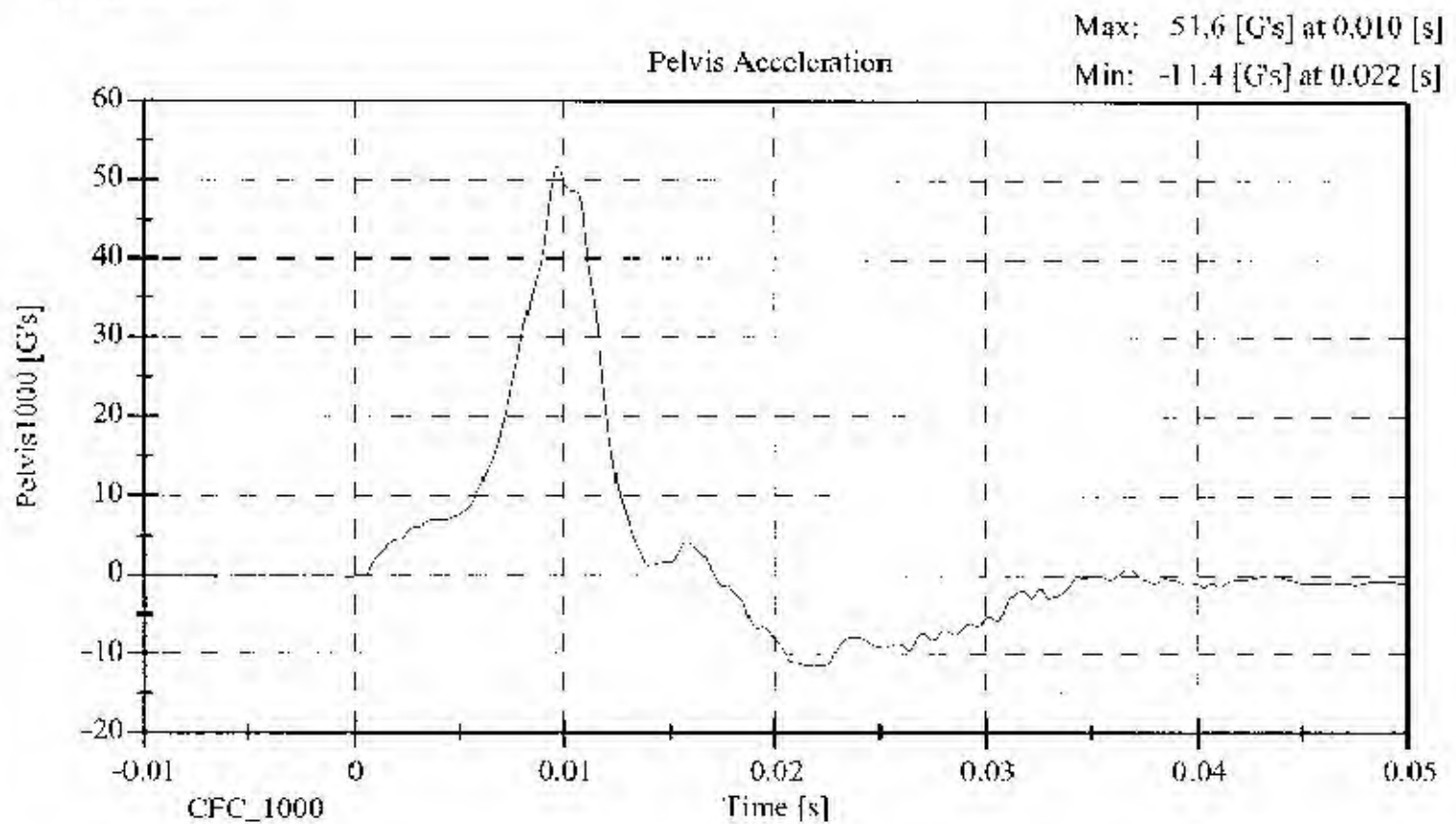
CONFIGURED FOR LEFT SIDE IMPACT

STD H3 Serial No.: D15 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swicicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	43.89

REMARKS: None

Pelvic Impact



**HEAD DROP TEST
POST-TEST**

(Test not required for SID certification)

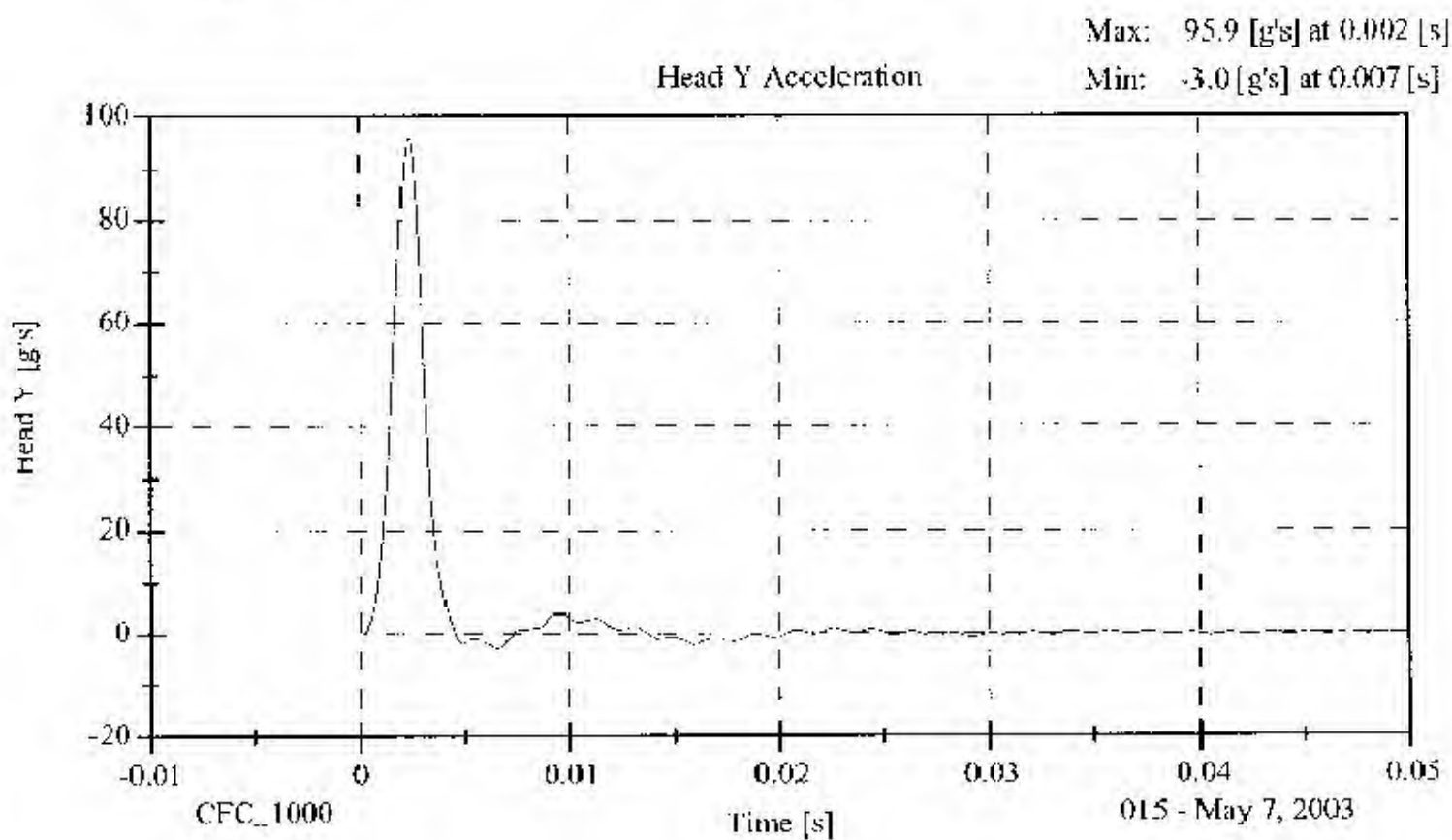
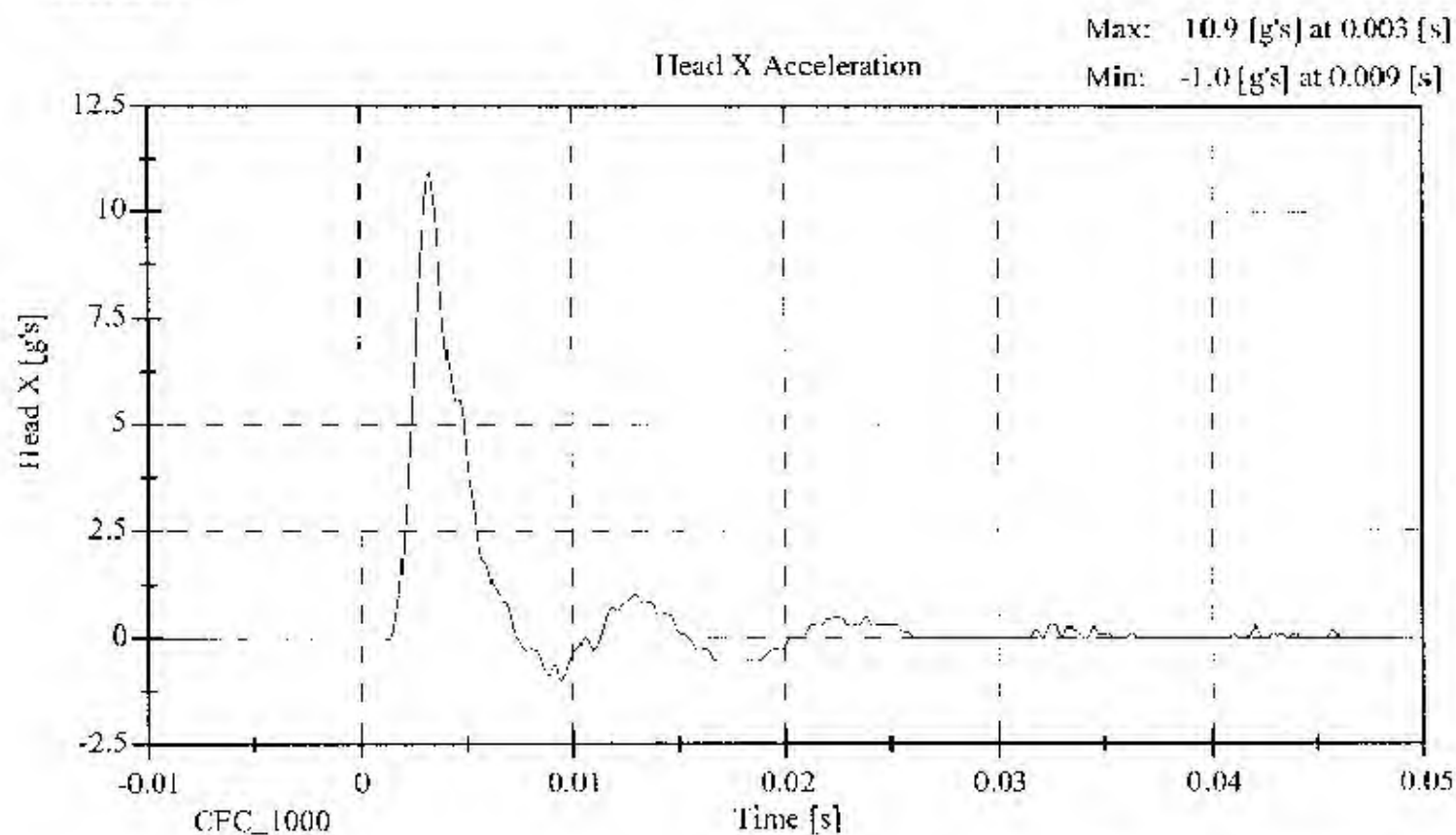
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 3
Date: May 7, 2003 Laboratory Technician: B. Swiecki

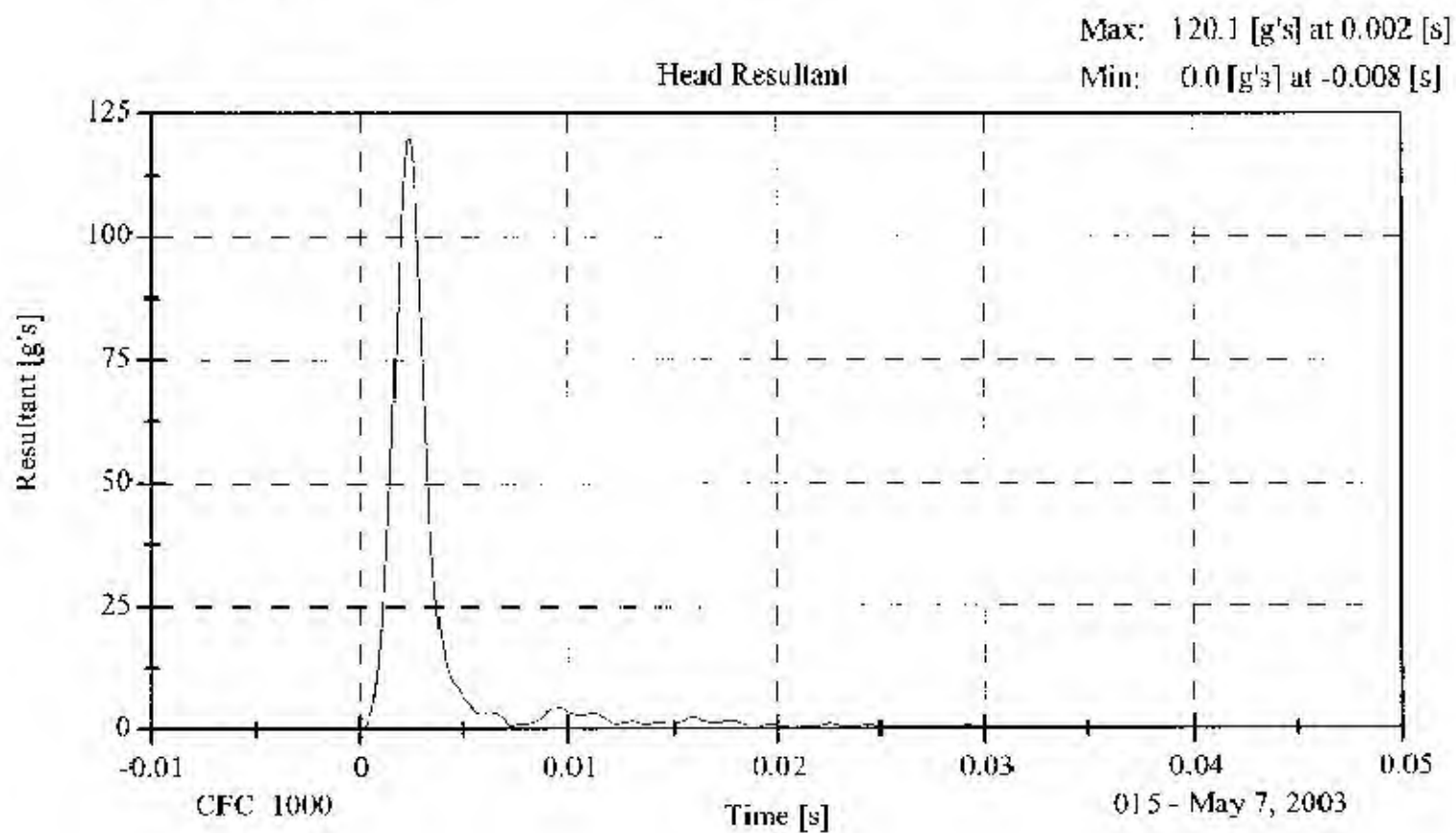
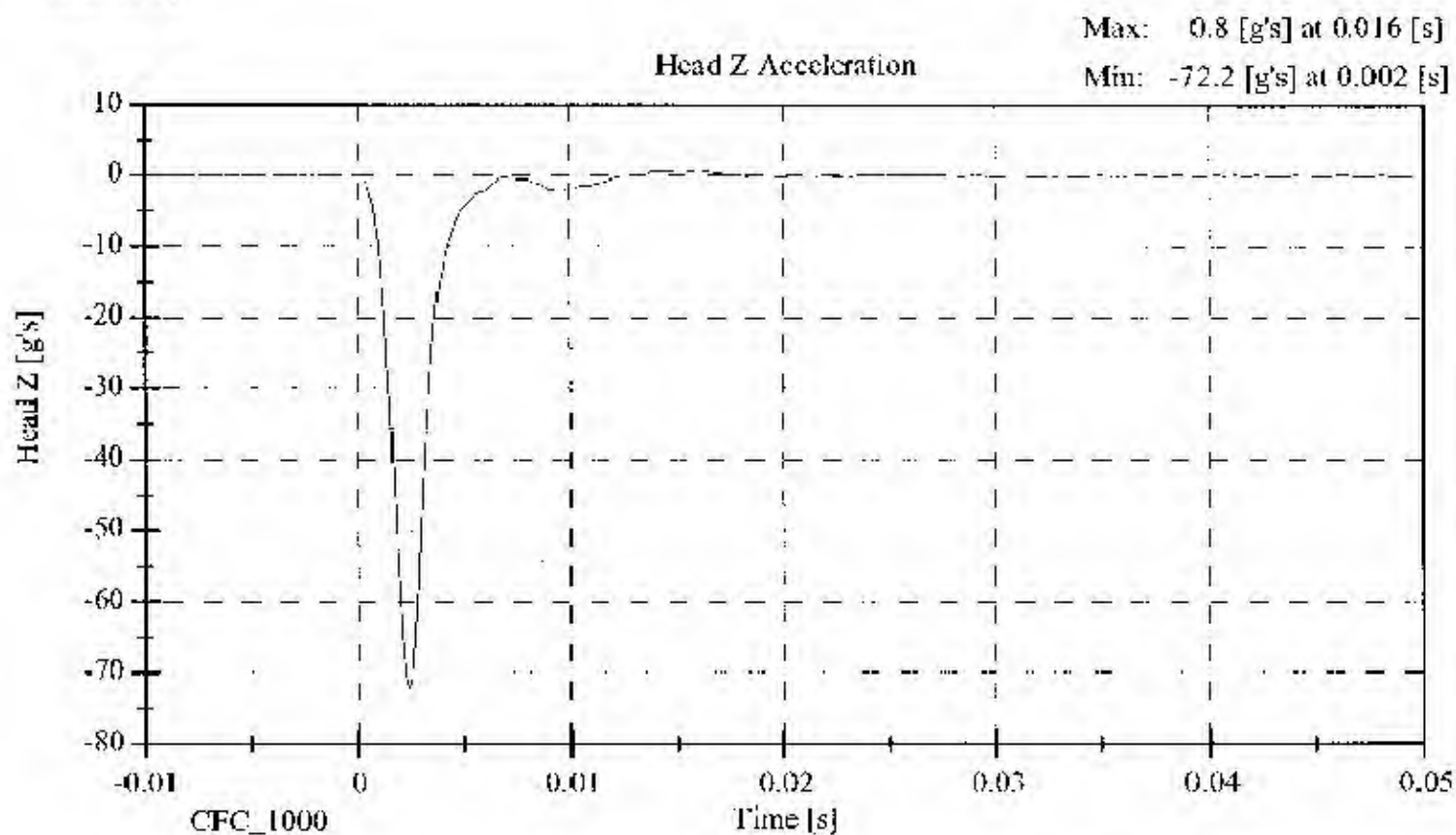
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	33.00
PEAK RESULTANT ACCELERATION (Gs)	120 - 150	120.13
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	10.92
CURVE PERCENT NONMODAL (%)	< 15	3.72

REMARKS: None

Head Drop



Head Drop



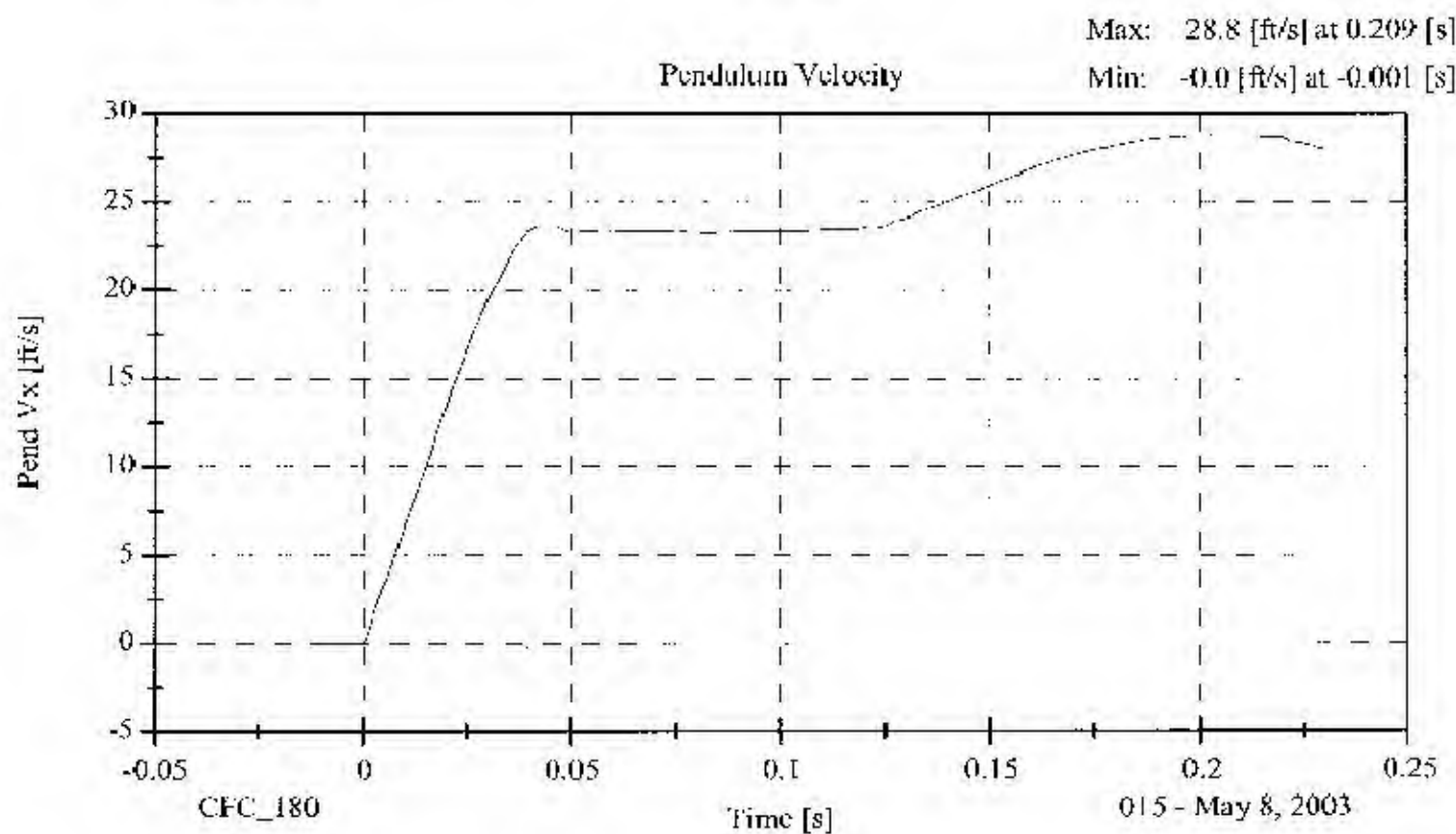
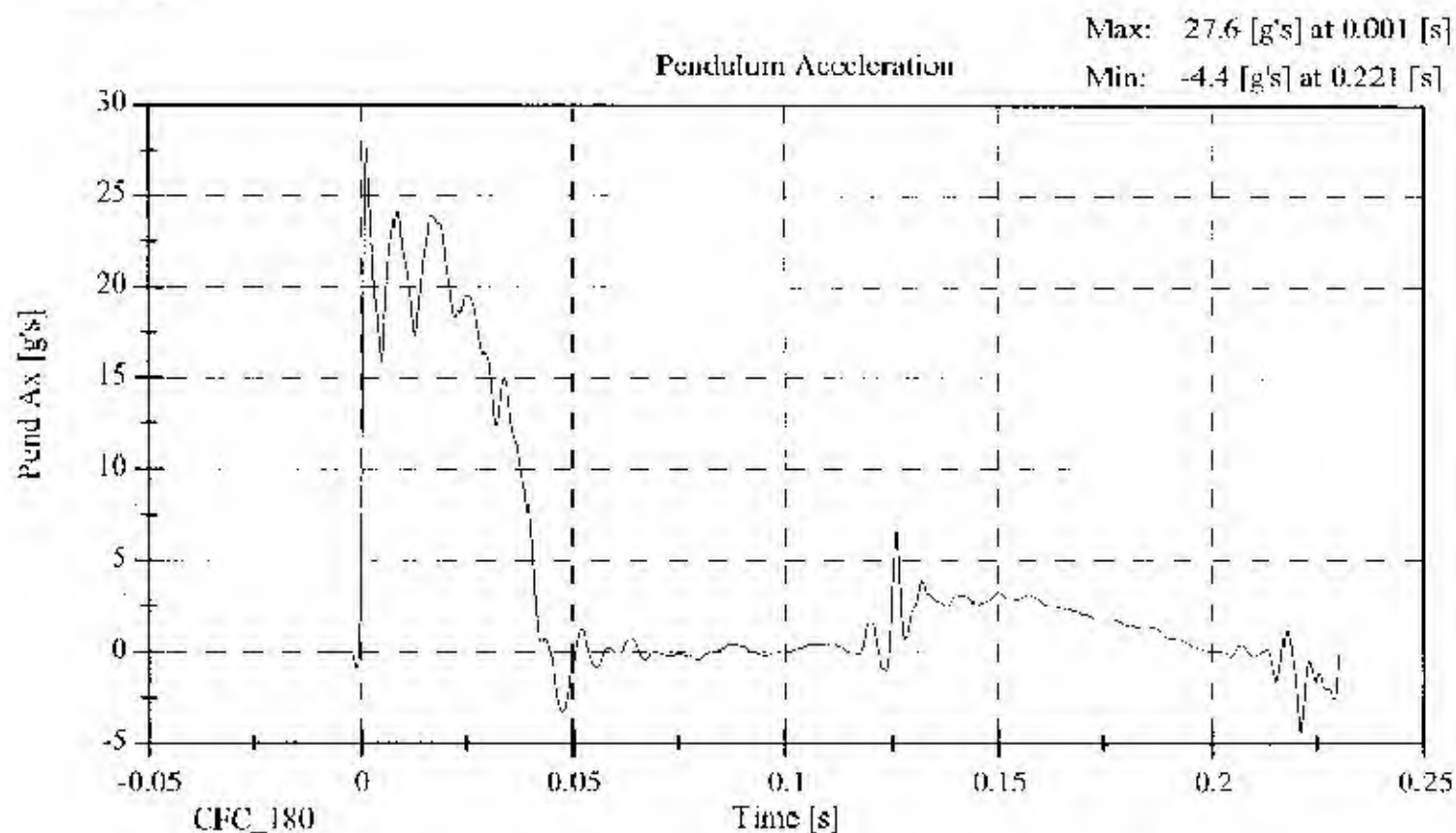
**LATERAL NECK BENDING TEST
POST-TEST**
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

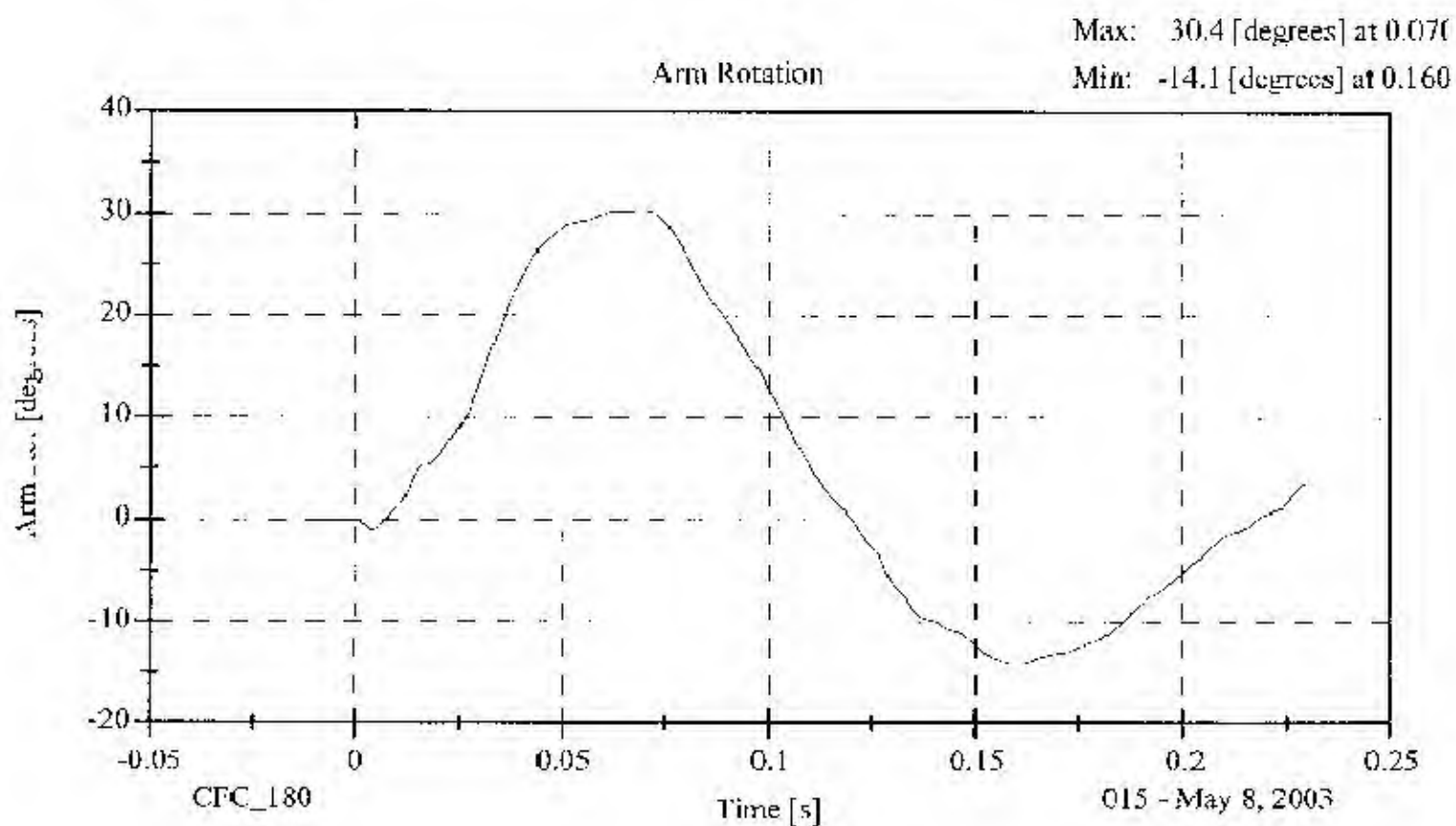
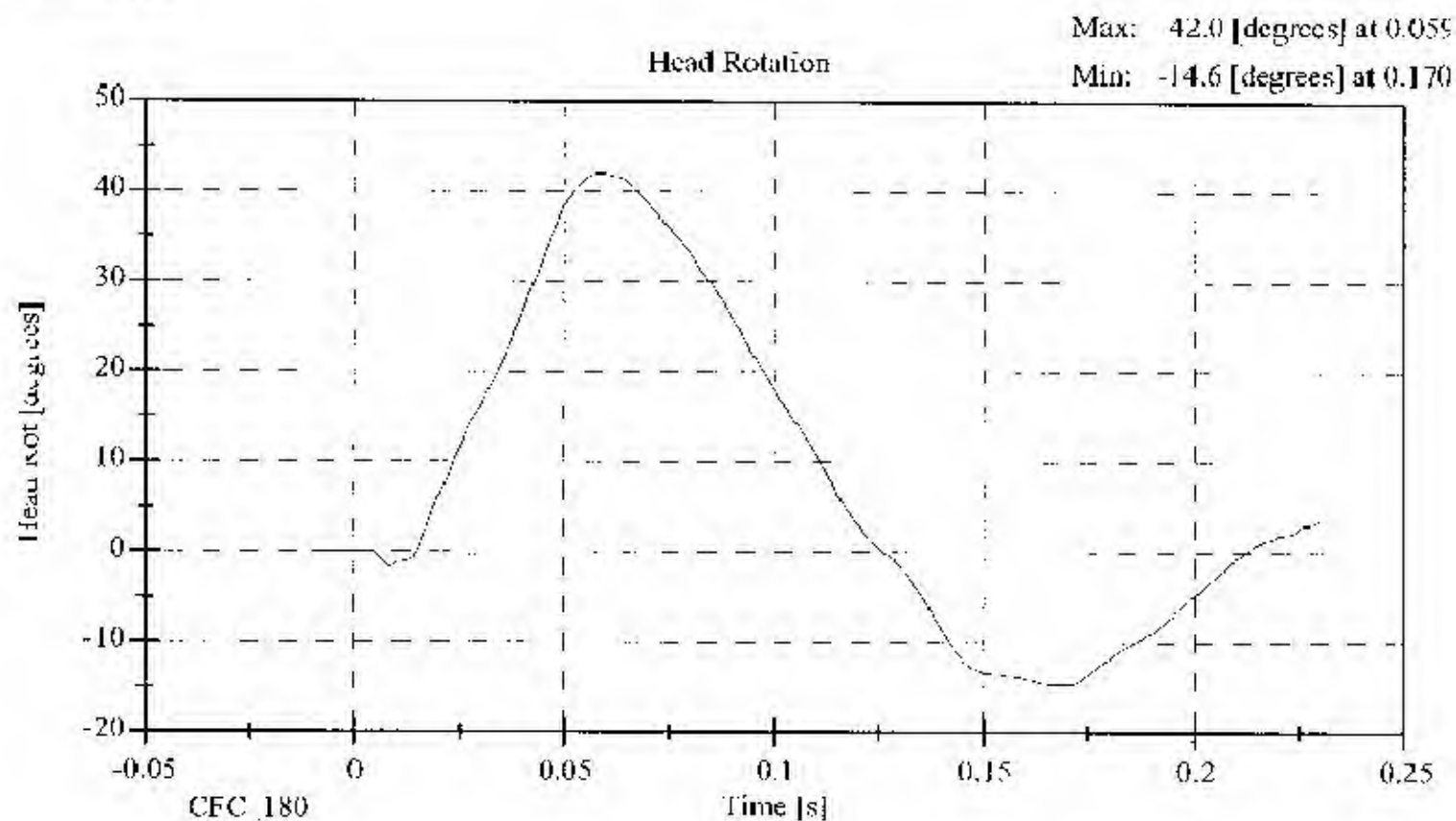
SID Serial No.: 015 Sequential Test Number: 3
Date: May 8, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	33.00
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.92
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.06
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.14
DELTA V @ 30 ms (m/s)	5.73 - 7.01	5.96
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.22
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	71.93
ROT. ANGLE TIME to ZERO (ms)	50 - 70	60.10
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 118	90.93
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	49.30
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	9.30

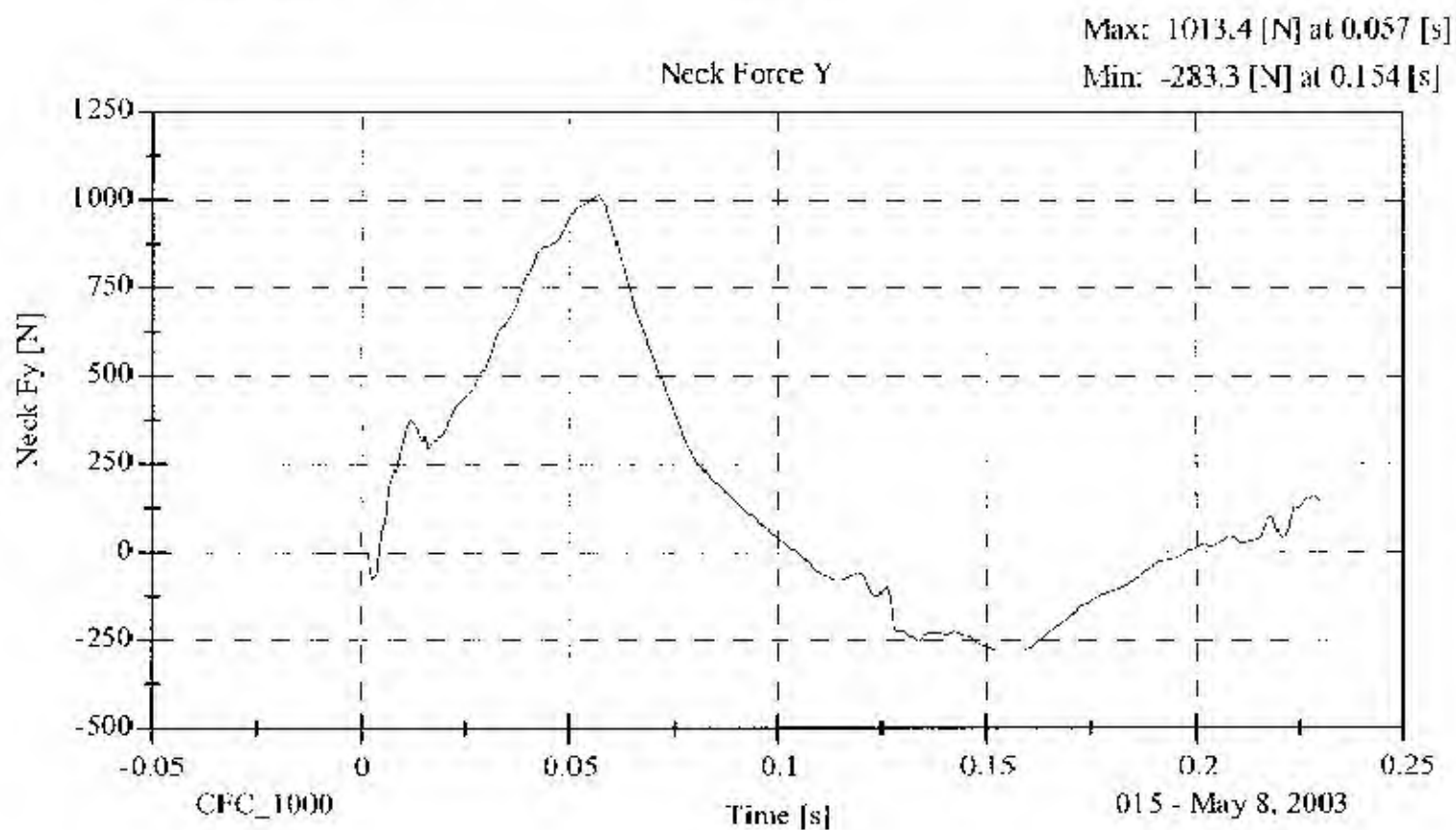
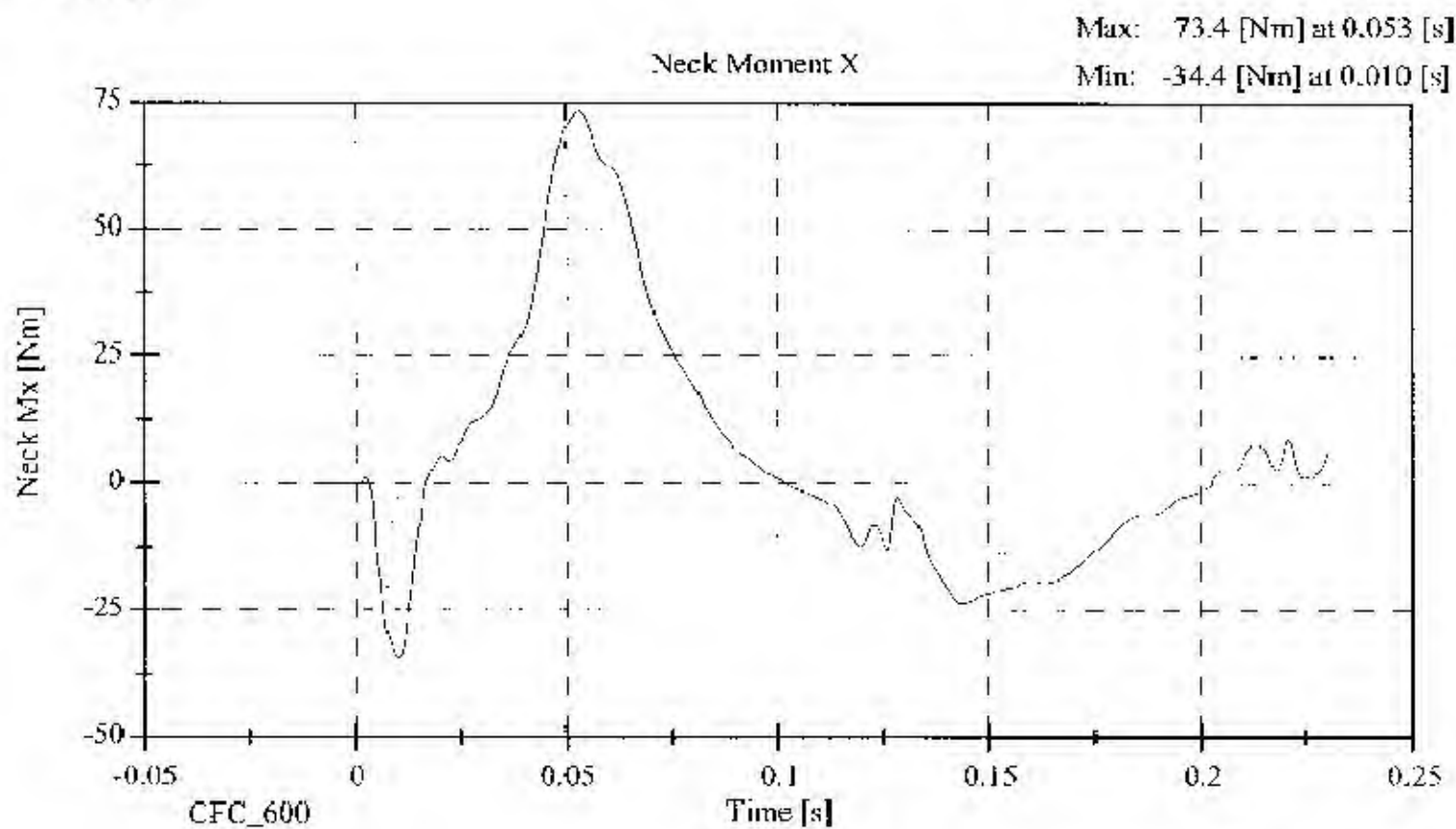
REMARKS: None



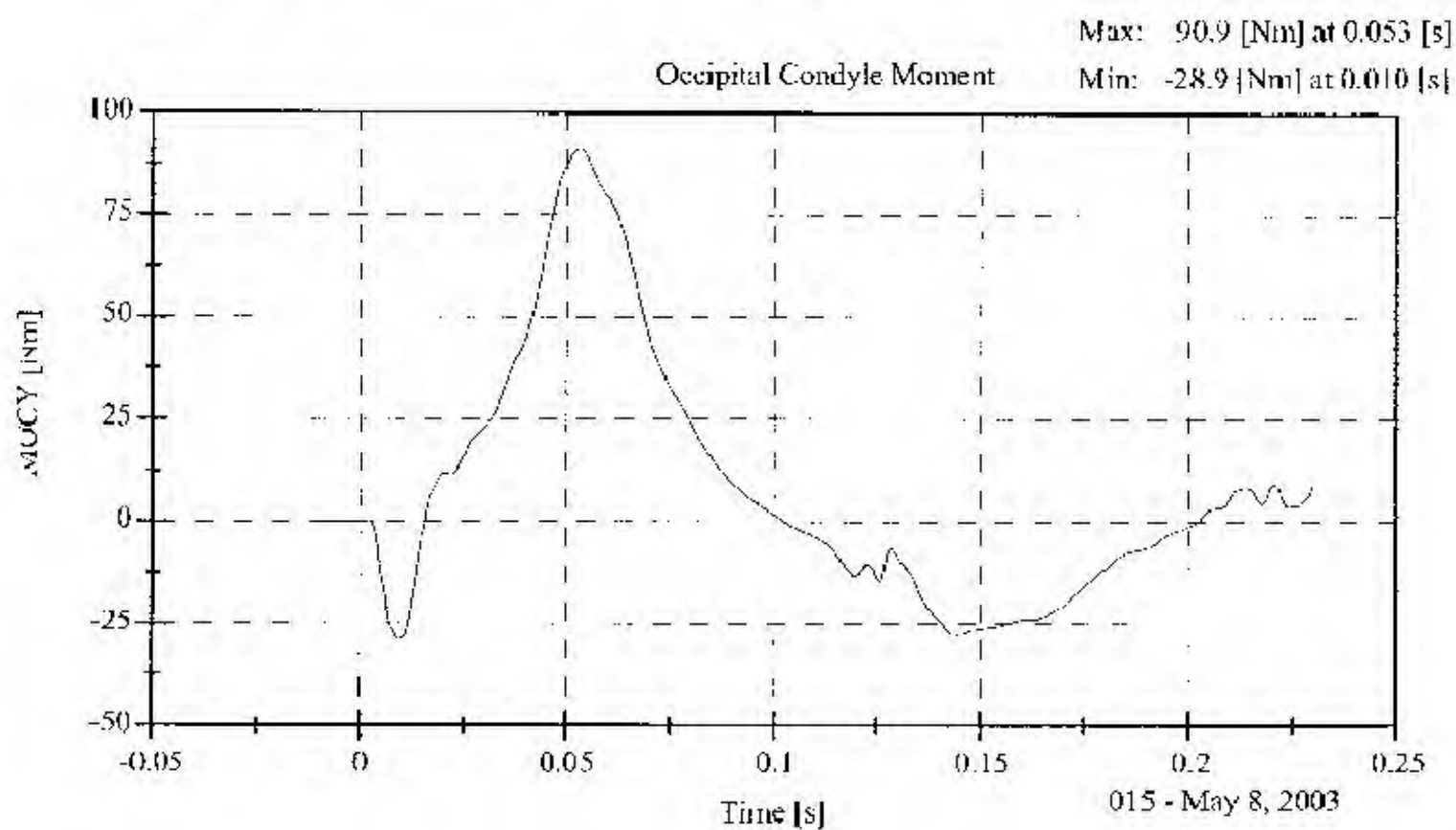
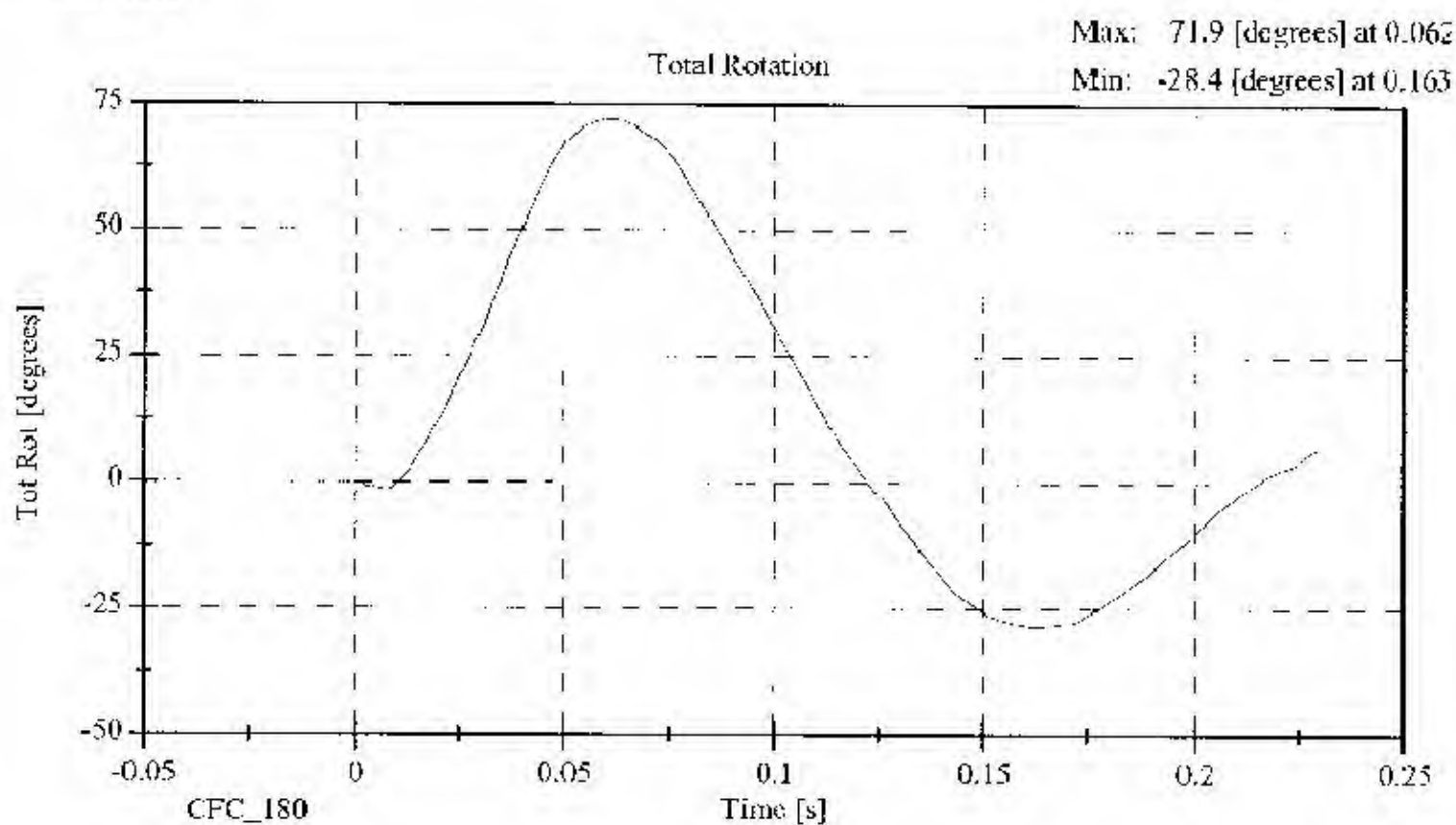
Neck Test



Neck Test



Neck Test



**ABDOMINAL COMPRESSION TEST
POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

3

Date: May 17, 2003

Laboratory Technician:

B. Swieczicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 13 mm (N)	104 - 162	113.4
FORCE @ 19 mm (N)	163 - 221	177.9
FORCE @ 25 mm (N)	222 - 280	258.9
FORCE @ 33 mm (N)	325 - 391	375.9

REMARKS: None

Dummy S/N 015

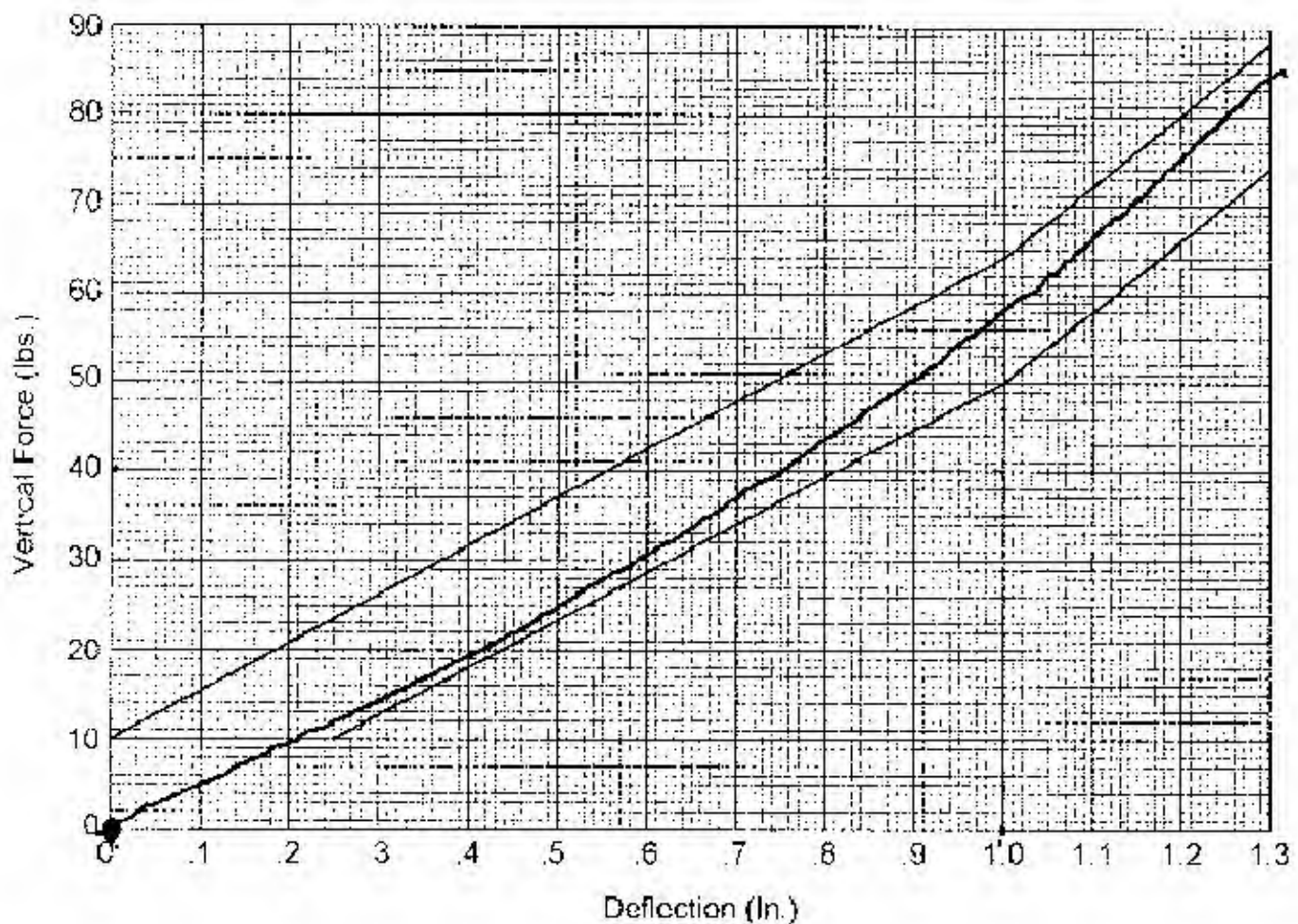
W/A _____

Date 5-9-08

Performed By [Signature]

Temp 70°

Humidity 39%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
(Test not required for SJD certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 17, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.3 - 151.2	111.2
FORCE @ 30° (N)	151.2 - 204.6	169.0
FORCE @ 40° (N)	204.6 - 258	218.0
RETURN ANGLE	12° max.	3.2°

REMARKS: None

Dummy S/N

015

W/A

Date

5-8-03

Performed By

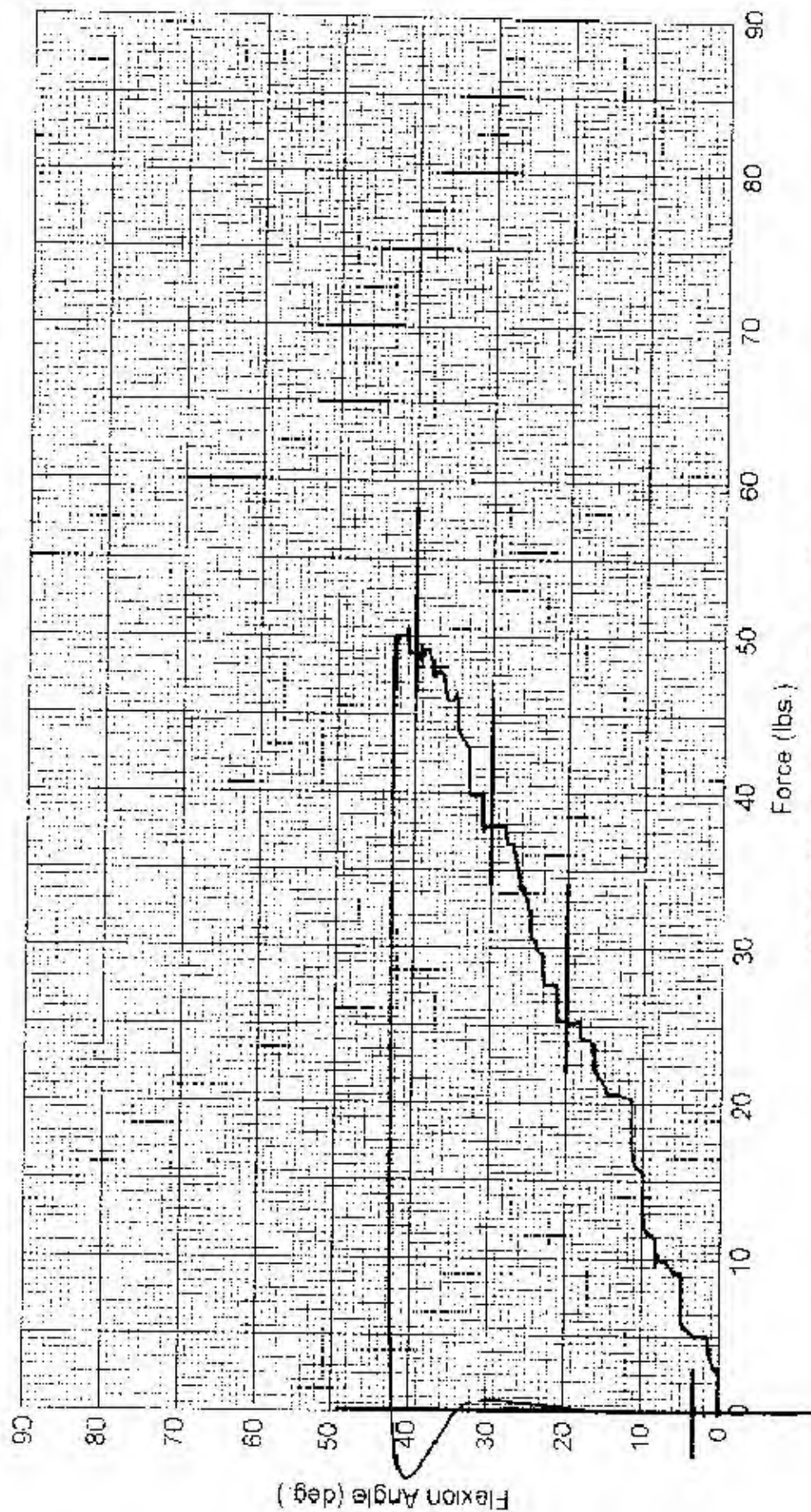
[Signature]

Temp.

70

Humidity

59%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID II3 Serial No.: 015 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: H. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

SID H3 NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST *	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID 113 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

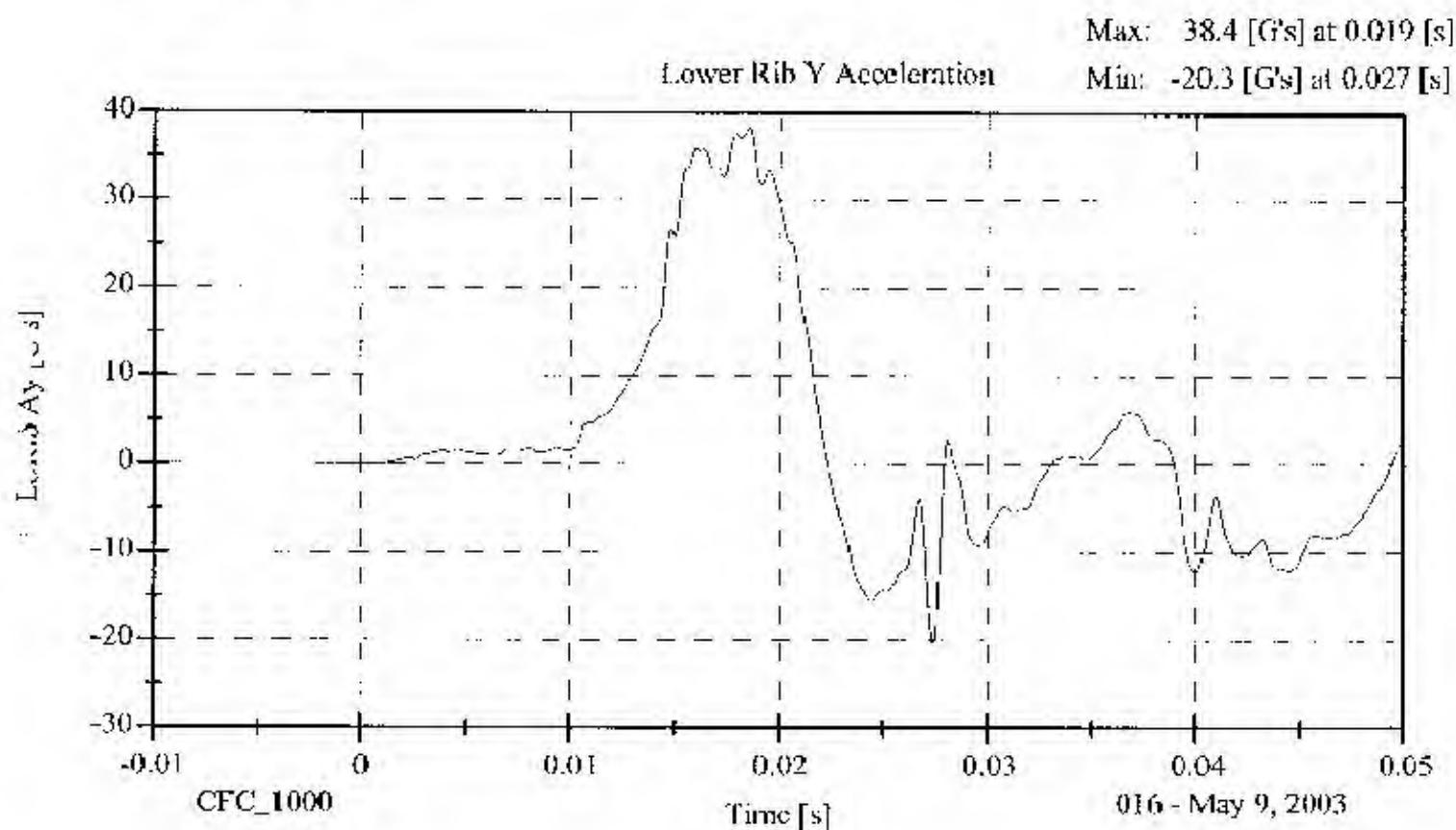
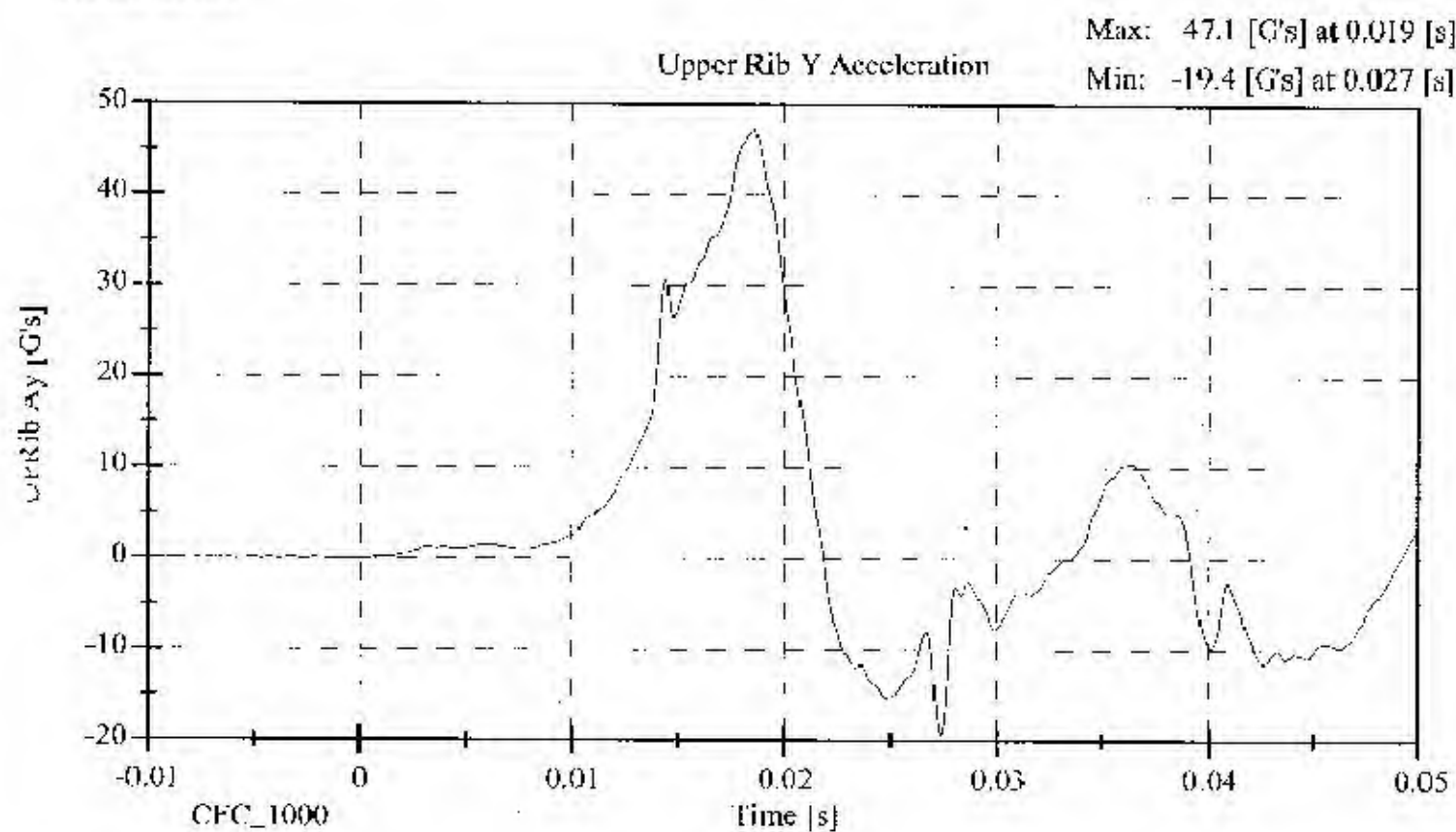
**LATERAL THORAX IMPACT TEST
POST TEST**

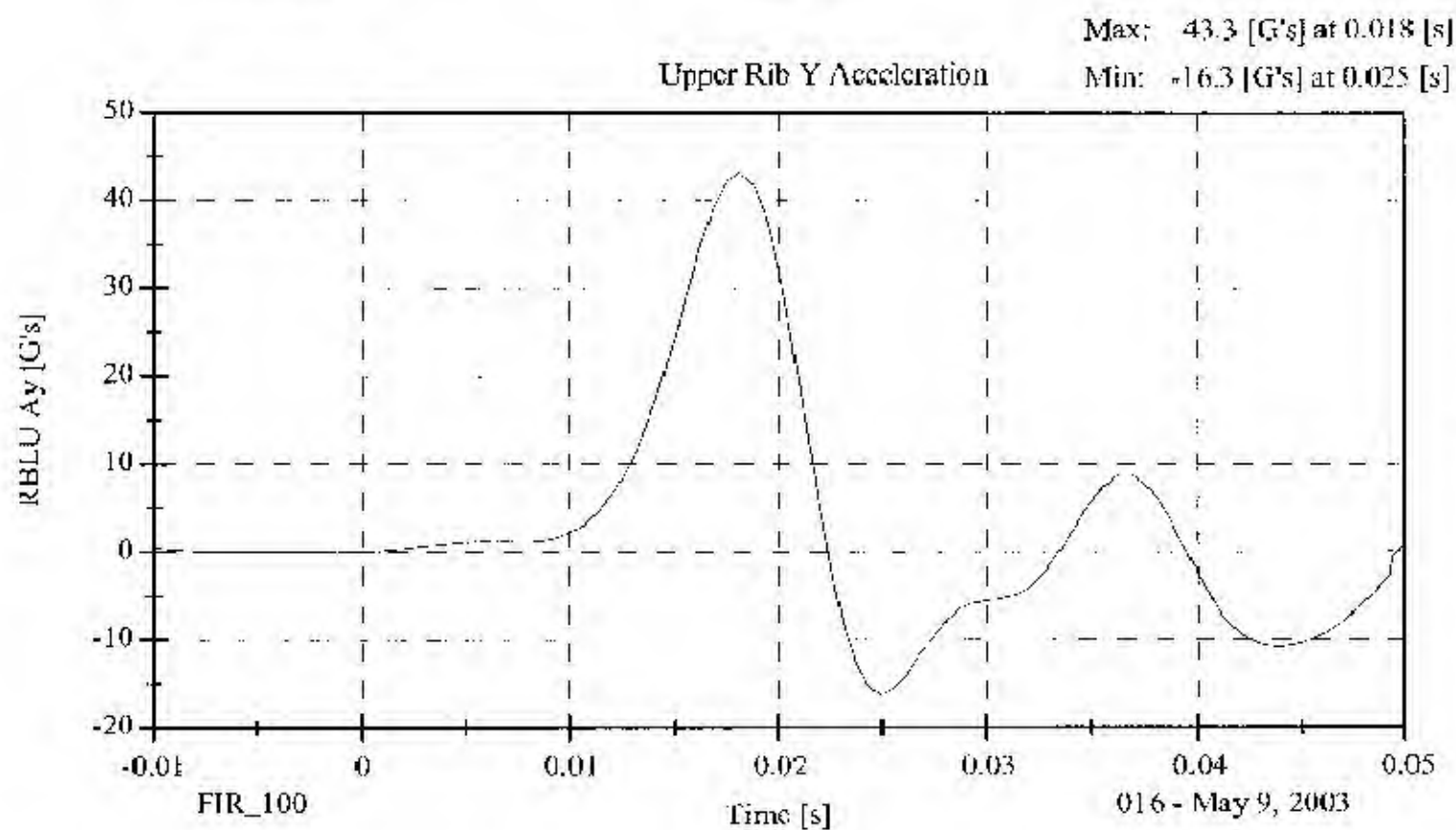
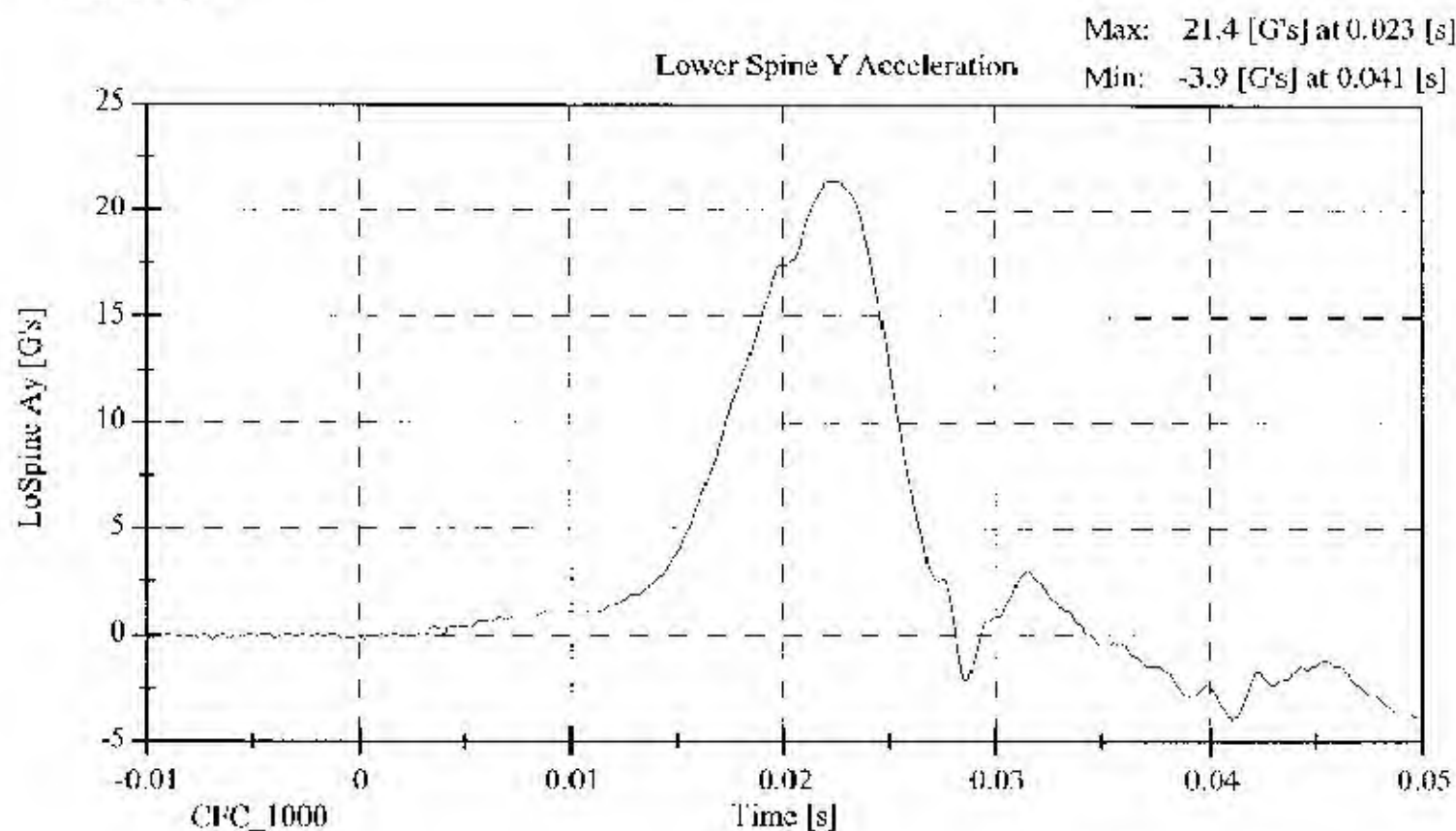
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016	Sequential Test Number: 3
Date: May 9, 2003	Laboratory Technician: B. Swiecicki

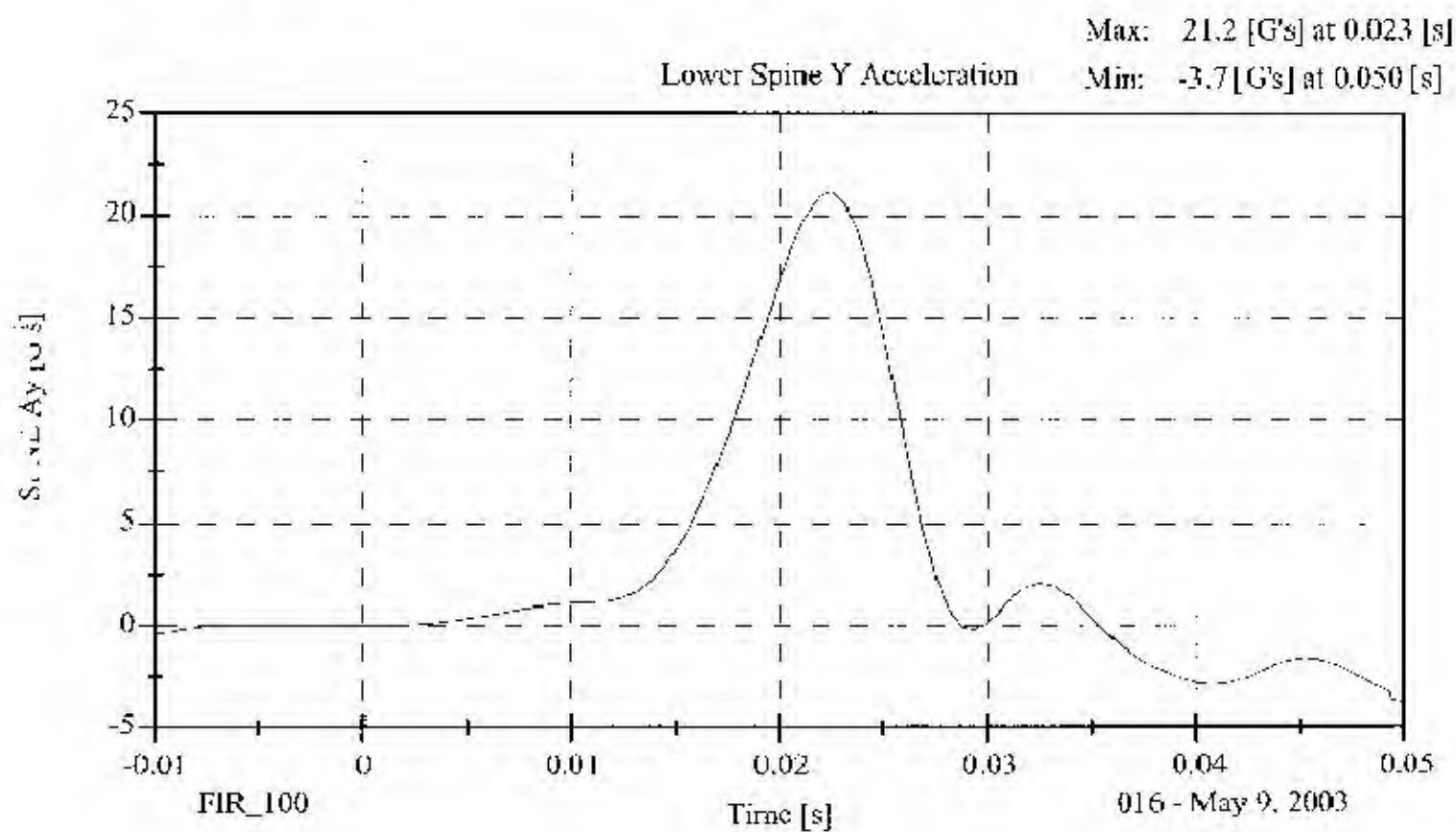
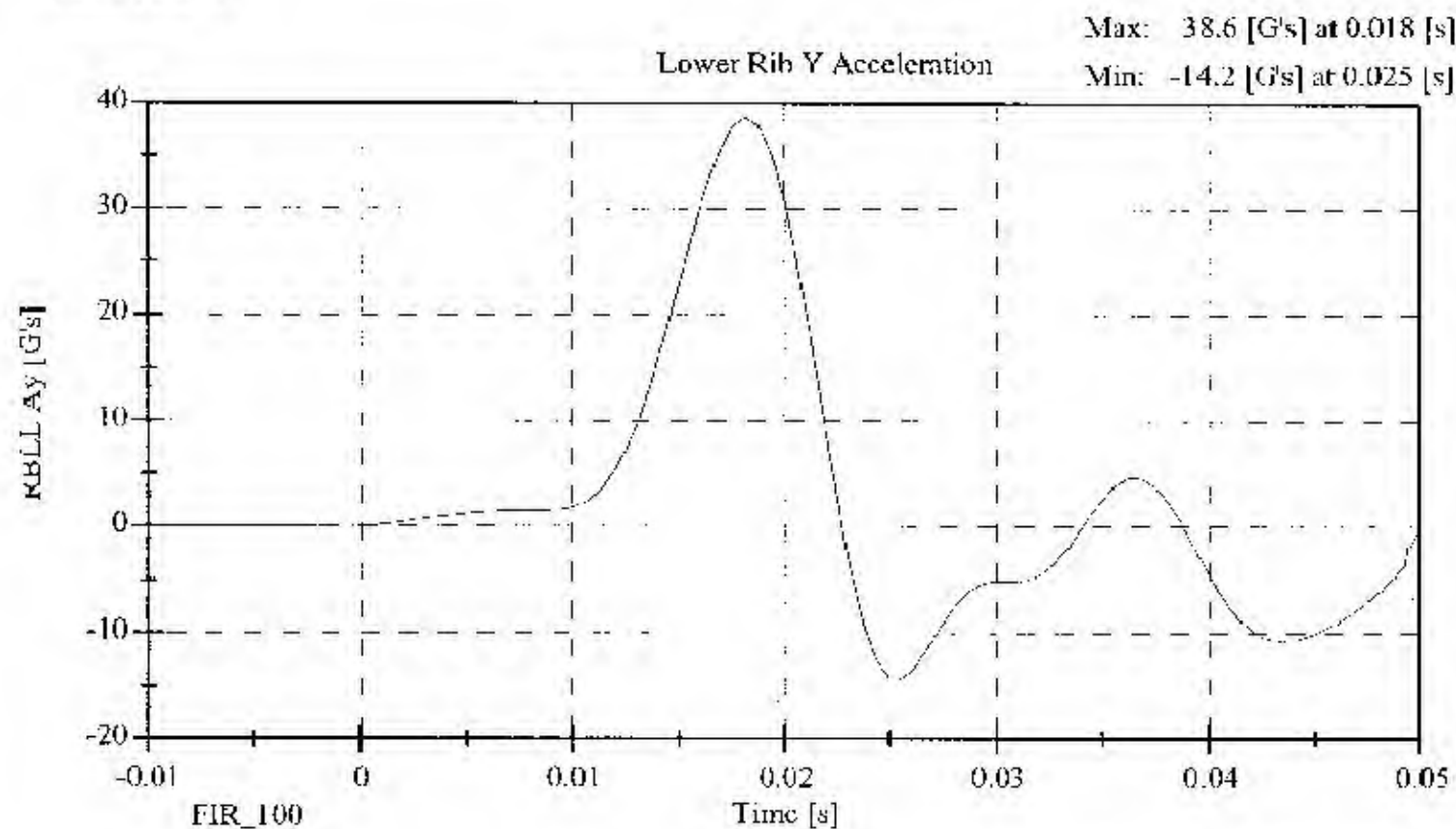
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
UPPER RIB (g's)	37 - 46	43.28
LOWER RIB (g's)	37 - 46	38.62
LOWER SPINE (g's)	15 - 22	21.20

REMARKS: None





Thorax Impact



**LATERAL PELVIS IMPACT TEST
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

3

Date: May 9, 2003

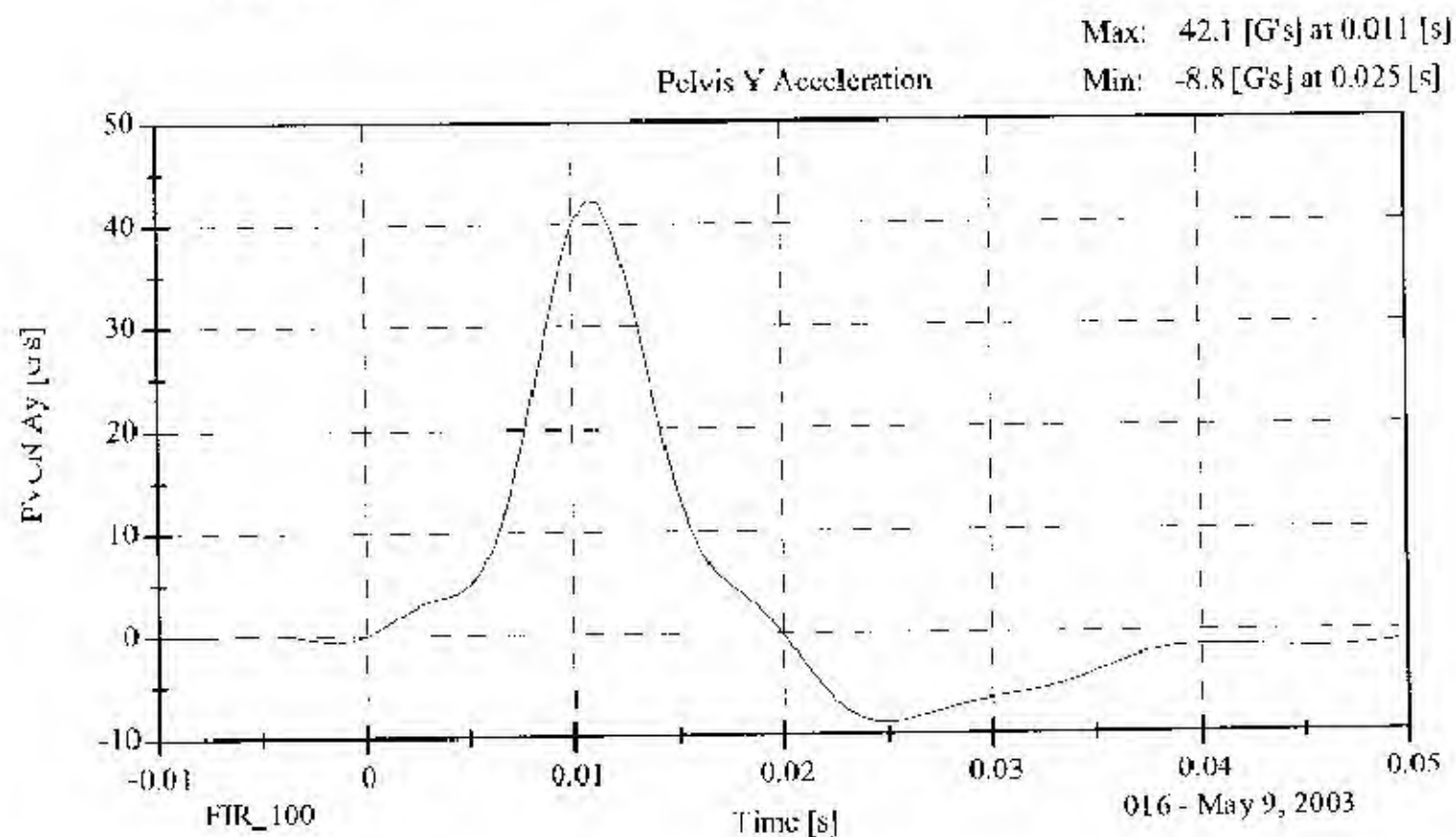
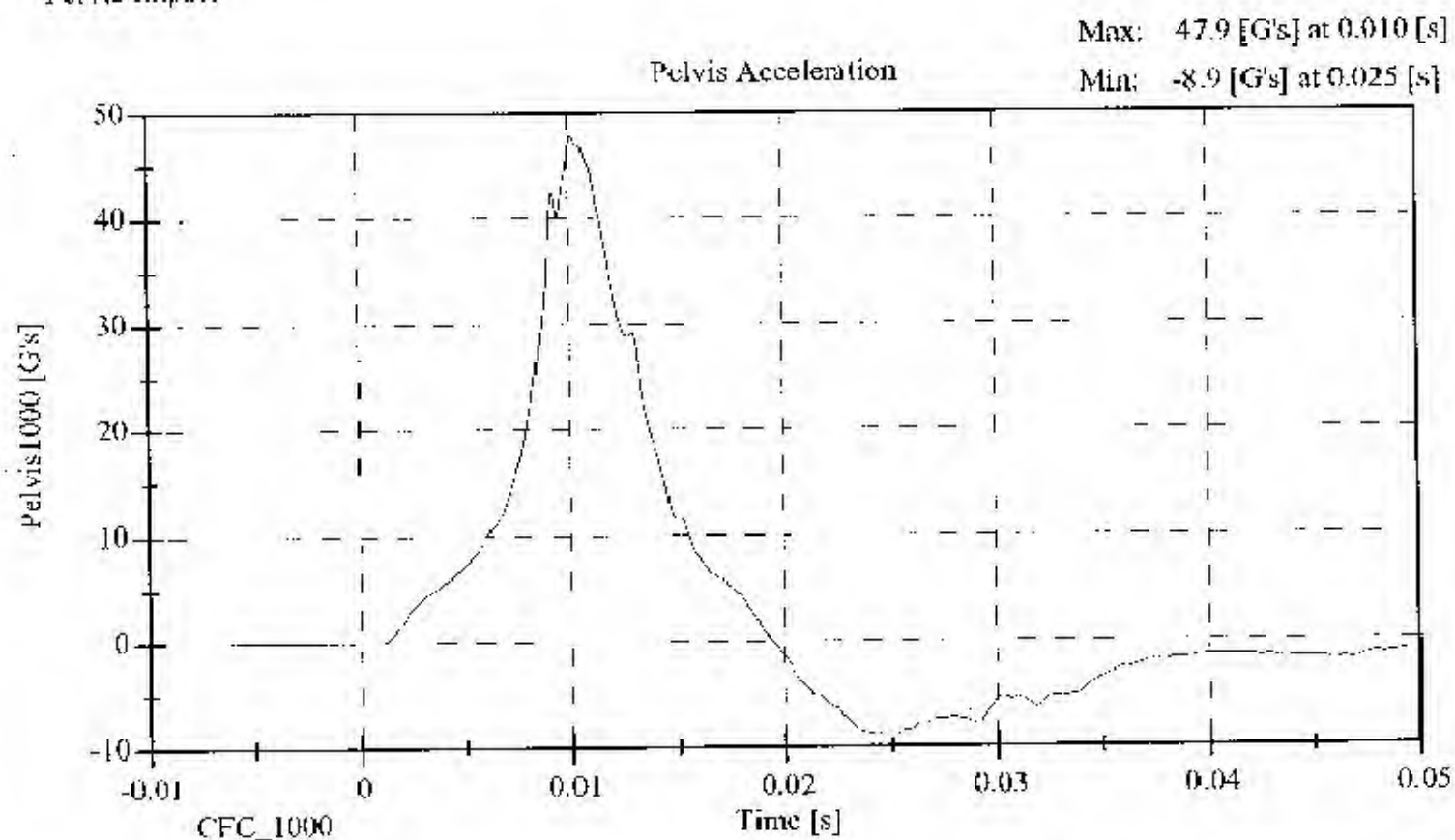
Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	42.12

REMARKS: None

Pelvic Impact



HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

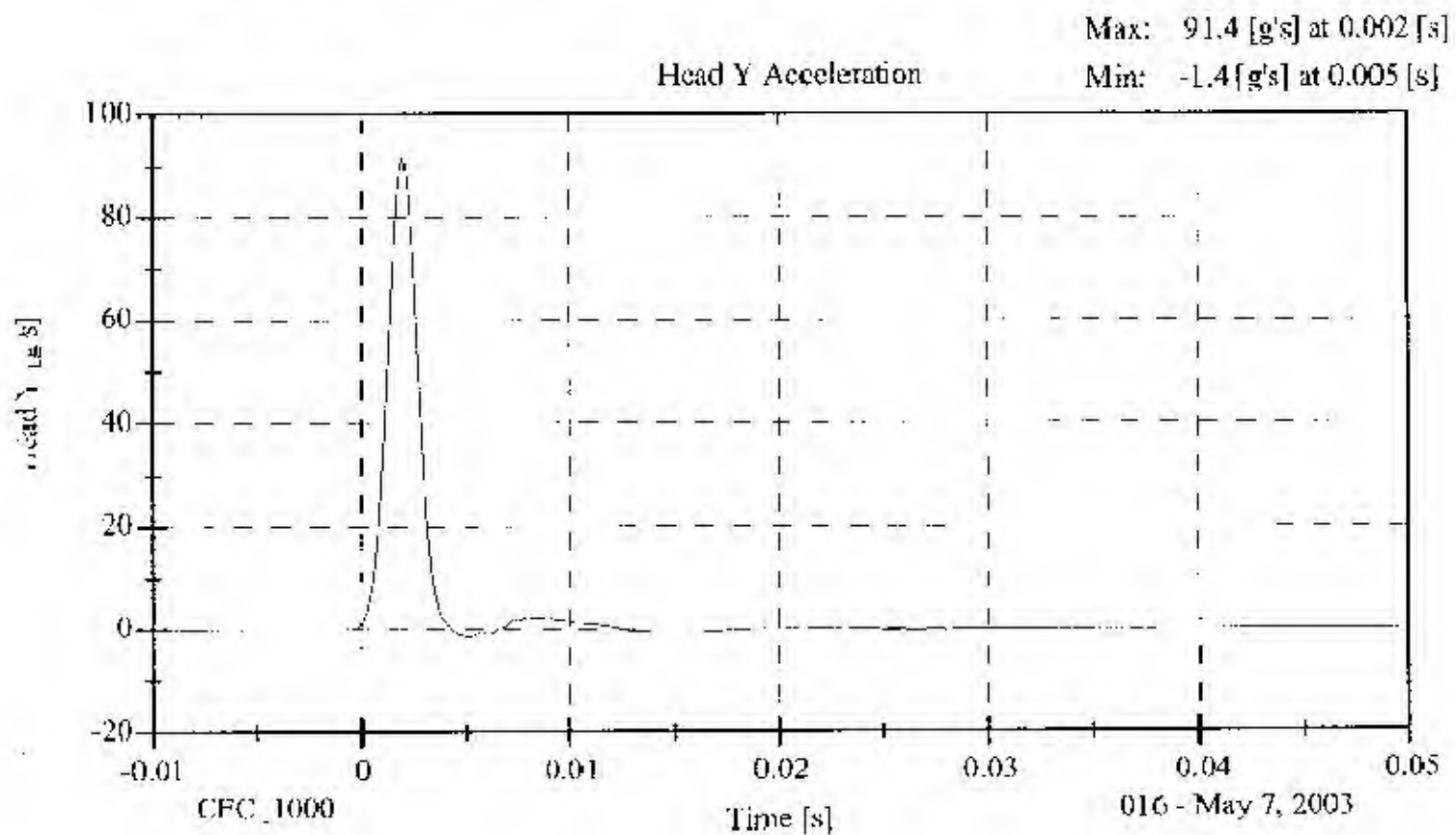
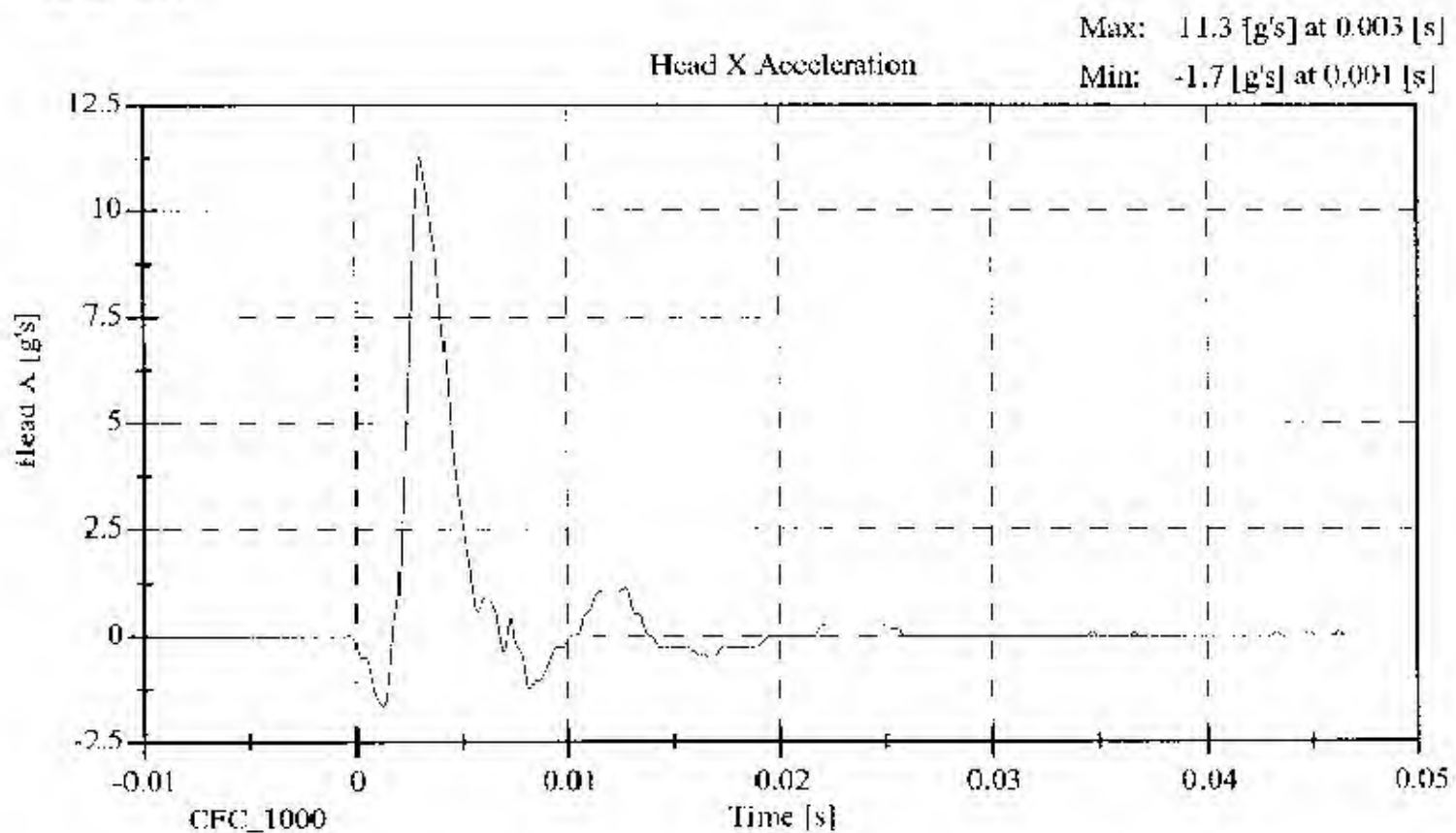
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 3
Date: May 7, 2003 Laboratory Technician: B. Swiecicki

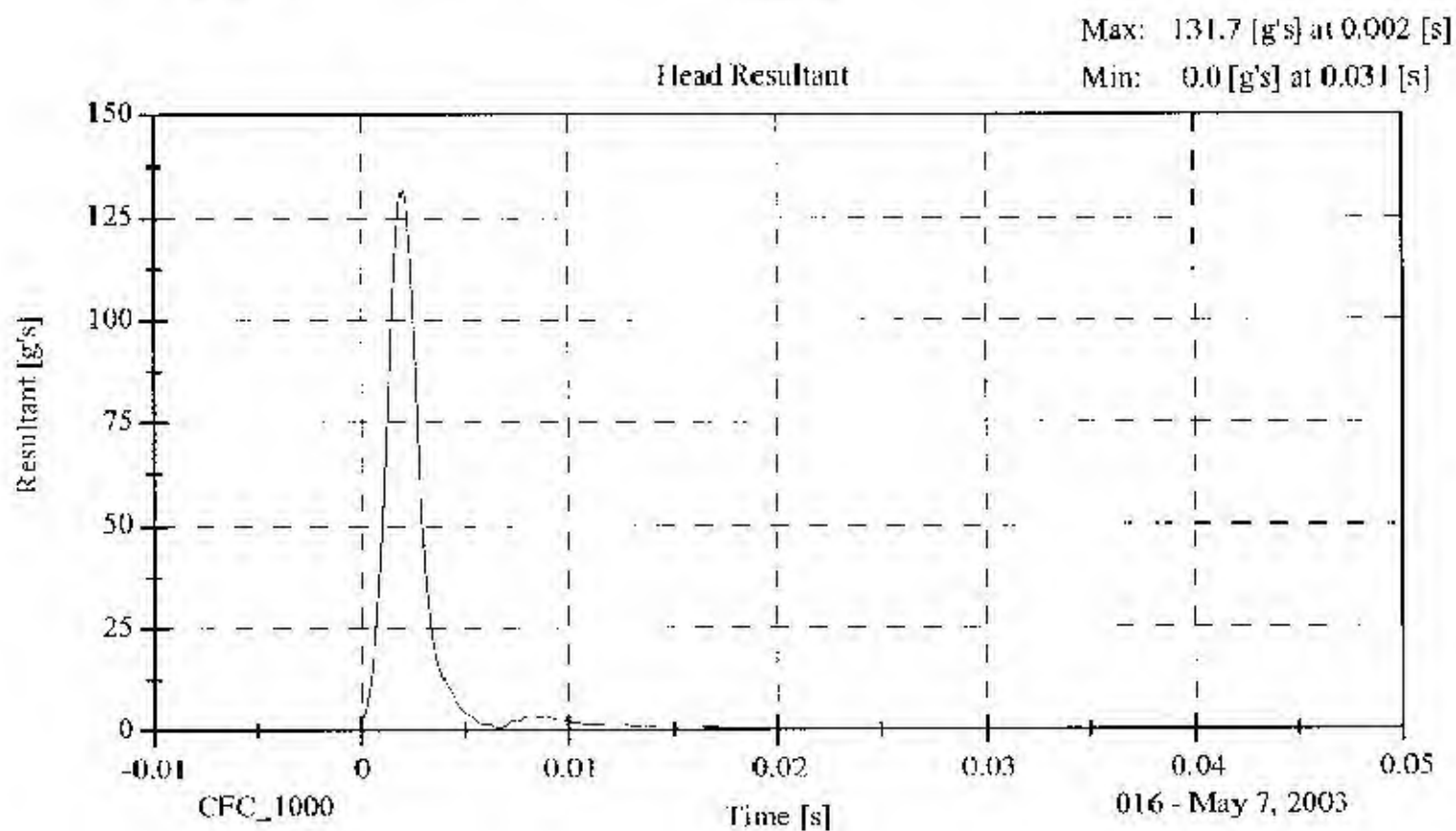
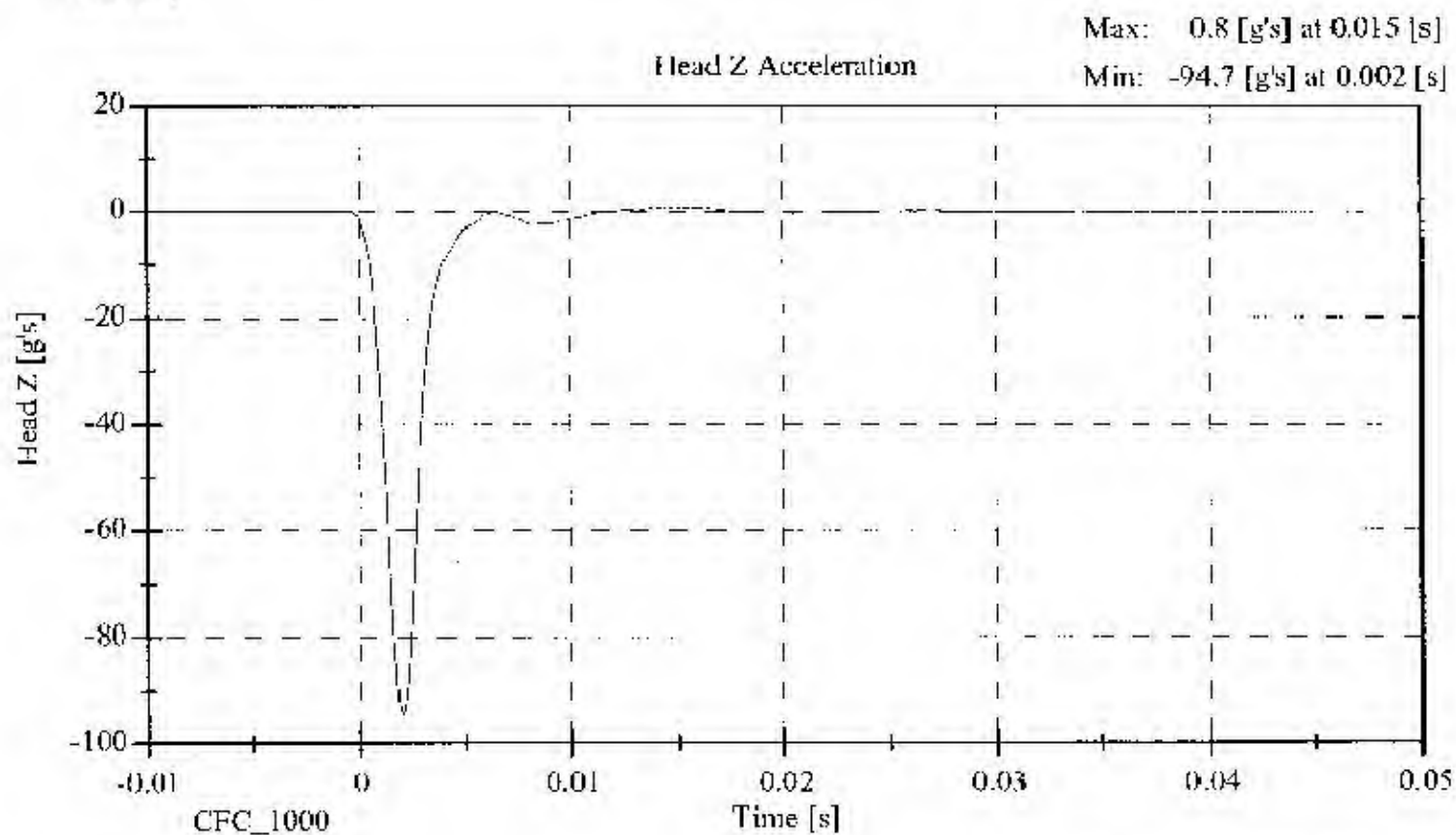
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 – 22.2	21.1
RELATIVE HUMIDITY (%)	10 – 70	33.00
PEAK RESULTANT ACCELERATION (Gs)	120 – 150	131.66
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	11.27
CURVE PERCENT NONMODAL (%)	< 15	2.67

REMARKS: None

Head Drop



Head Drop



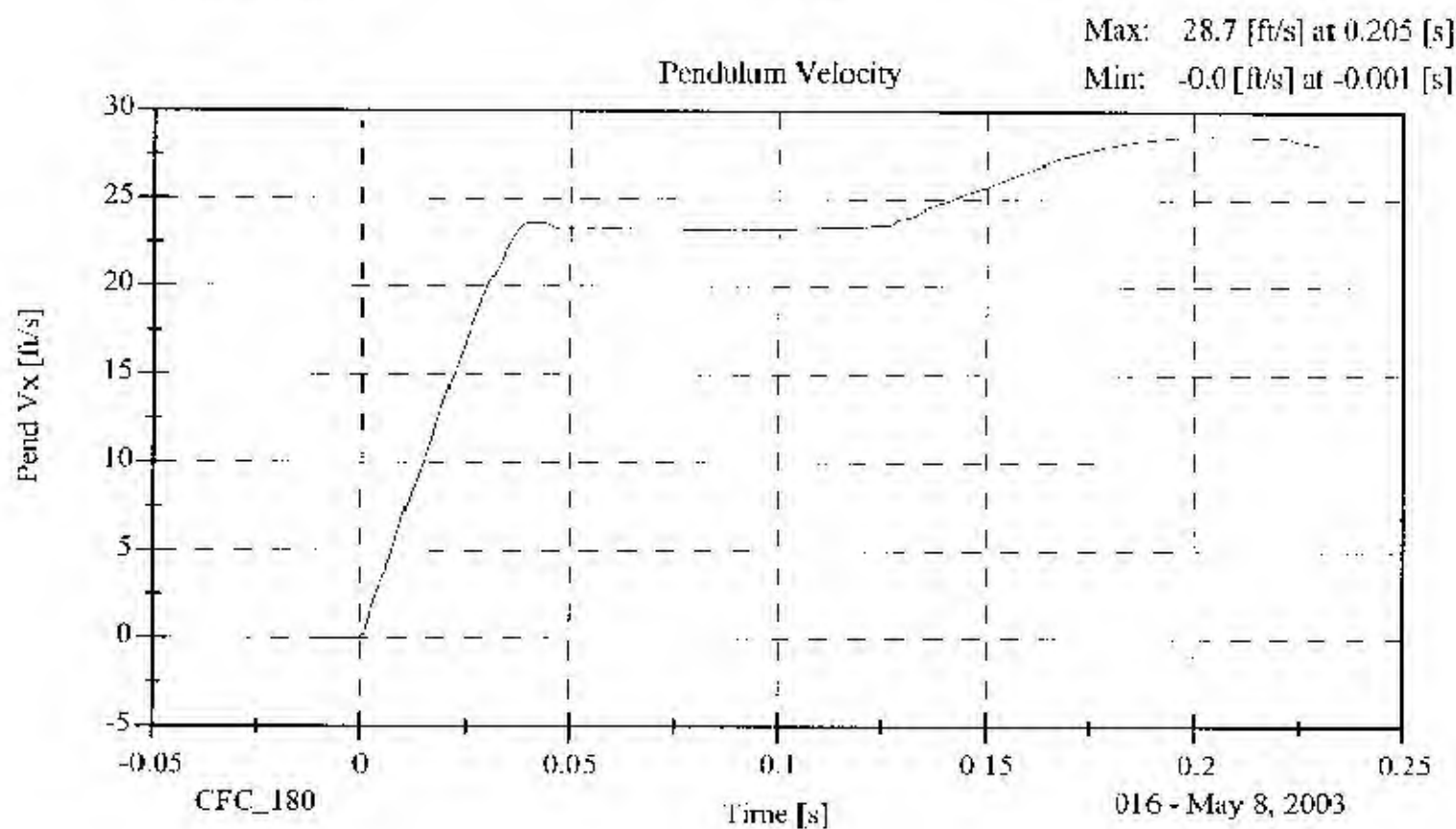
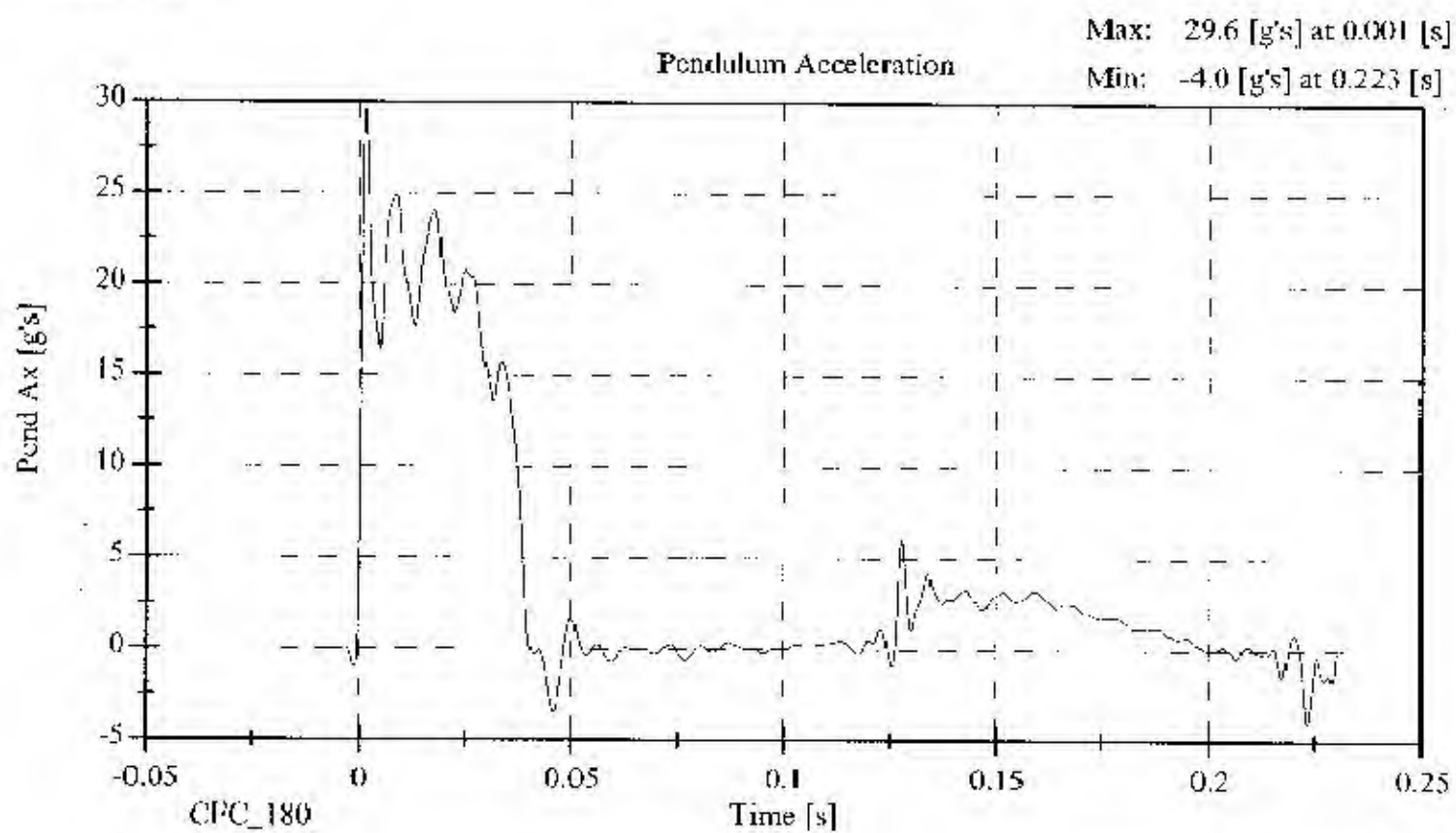
**LATERAL NECK BENDING TEST
POST-TEST**
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 3
Date: May 8, 2003 Laboratory Technician: B. Swiecicki

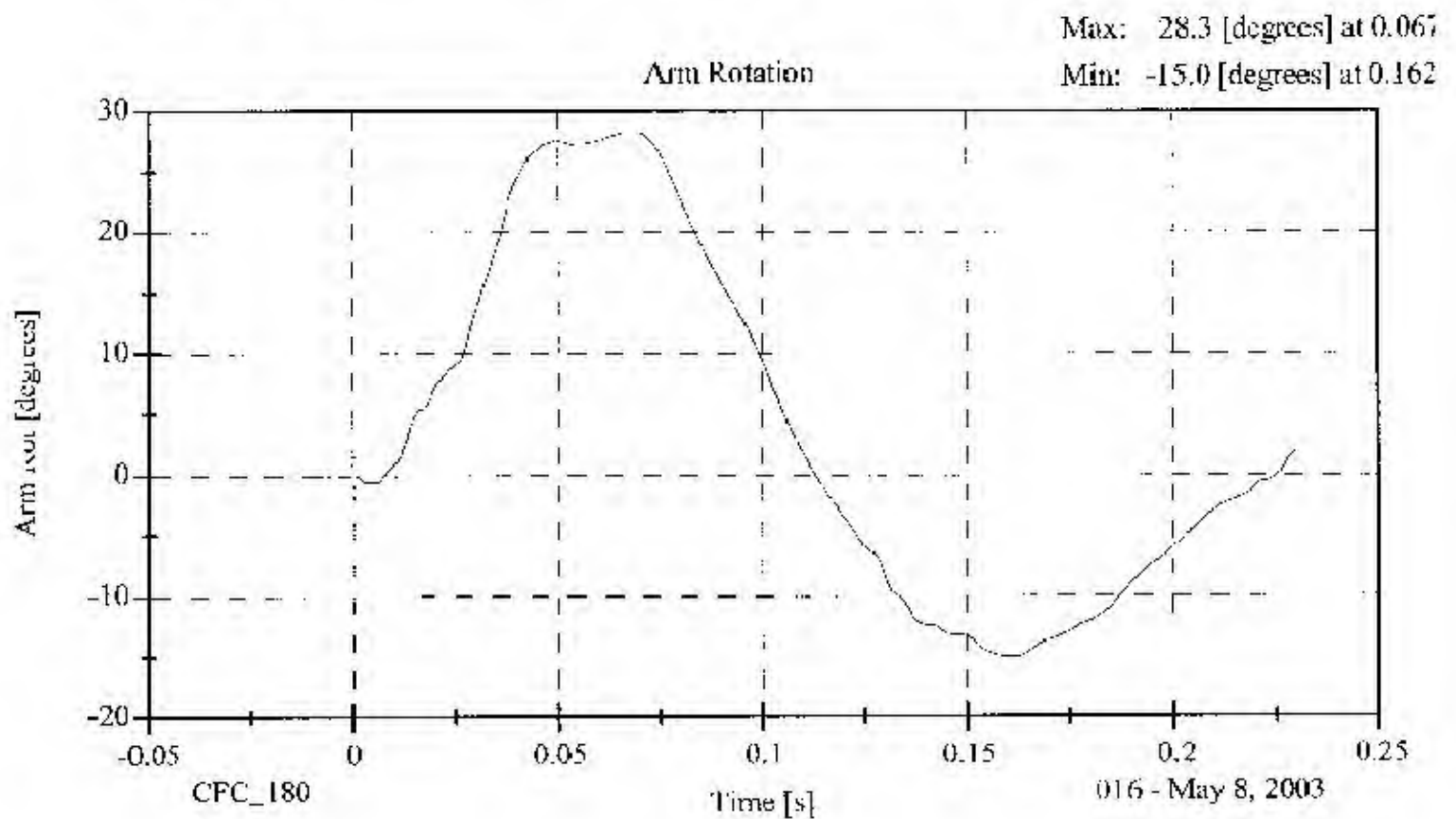
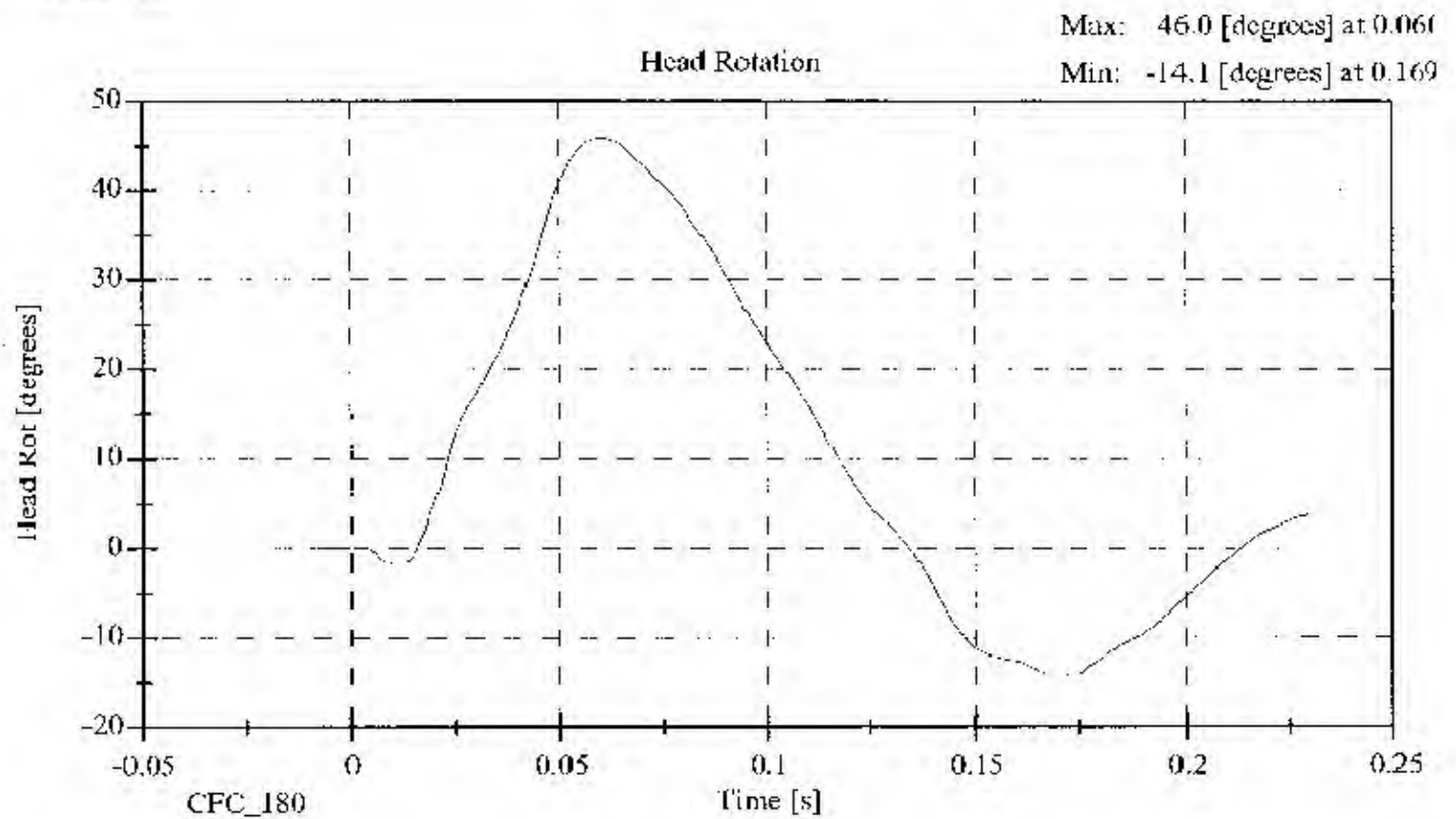
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	33.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.90
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.14
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.20
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.07
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.21
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	73.66
ROT. ANGLE TIME to ZERO (ms)	50 - 70	61.50
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	88.14
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	52.10
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	10.10

REMARKS: None

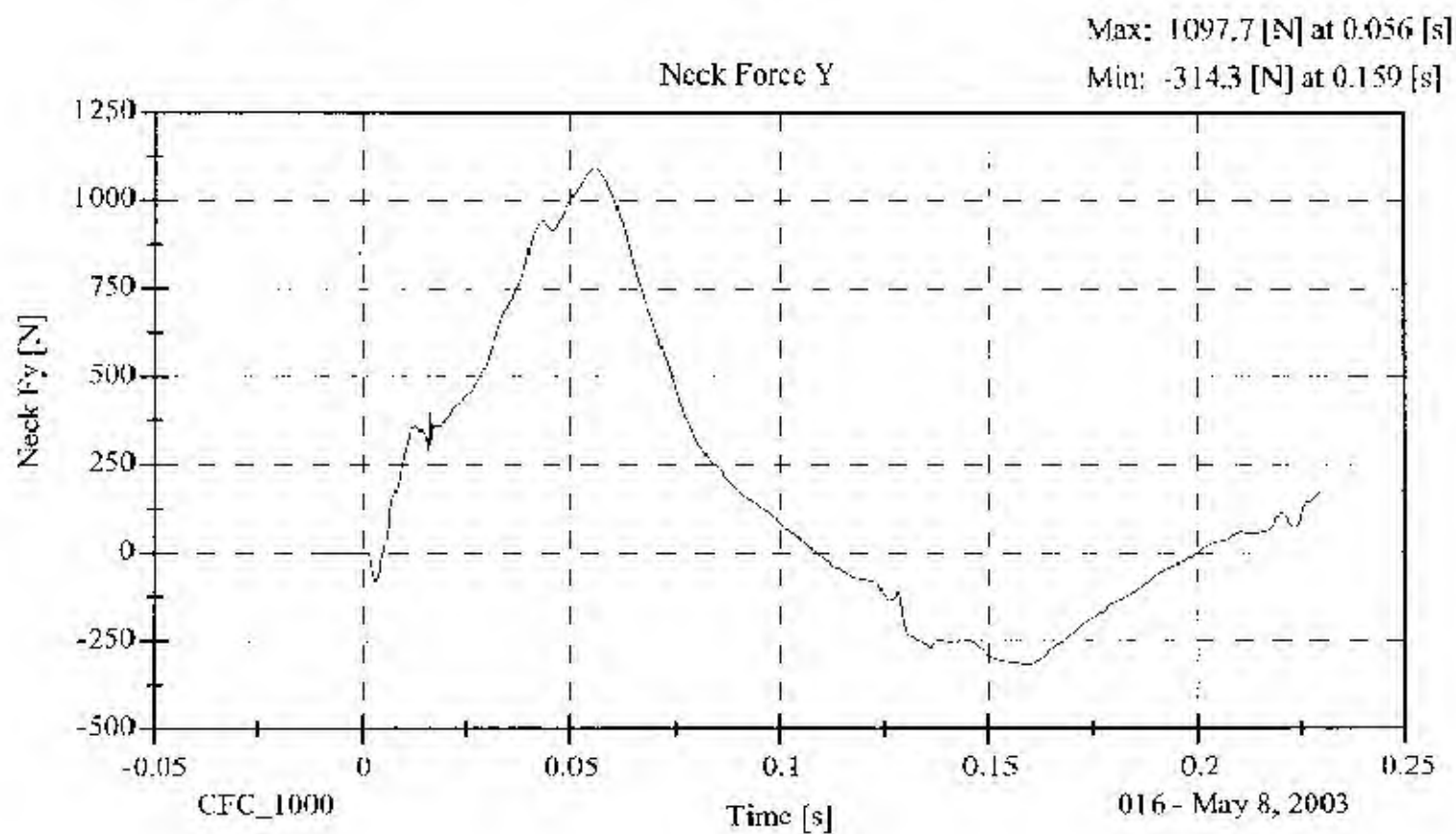
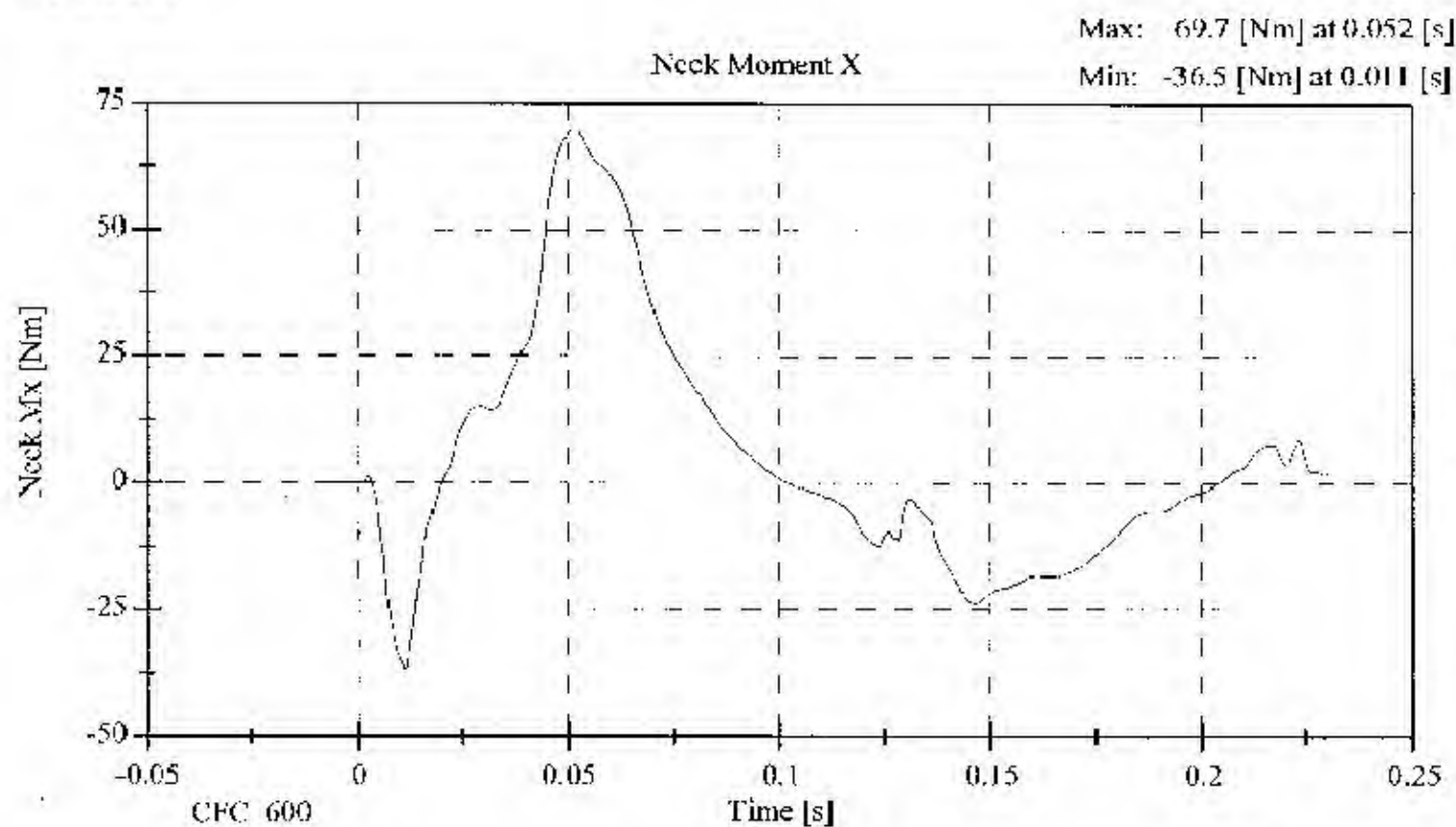


016 - May 8, 2003

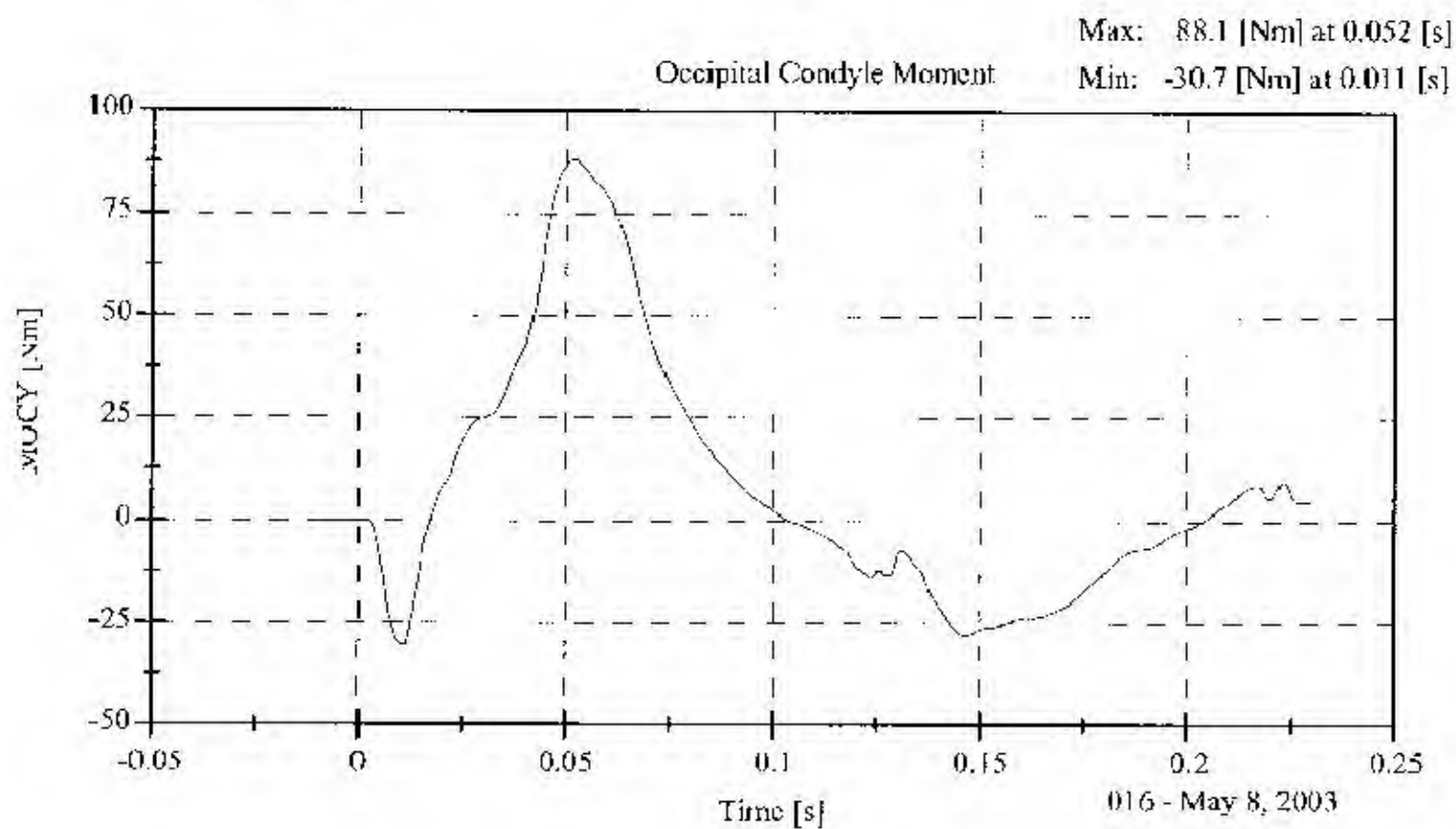
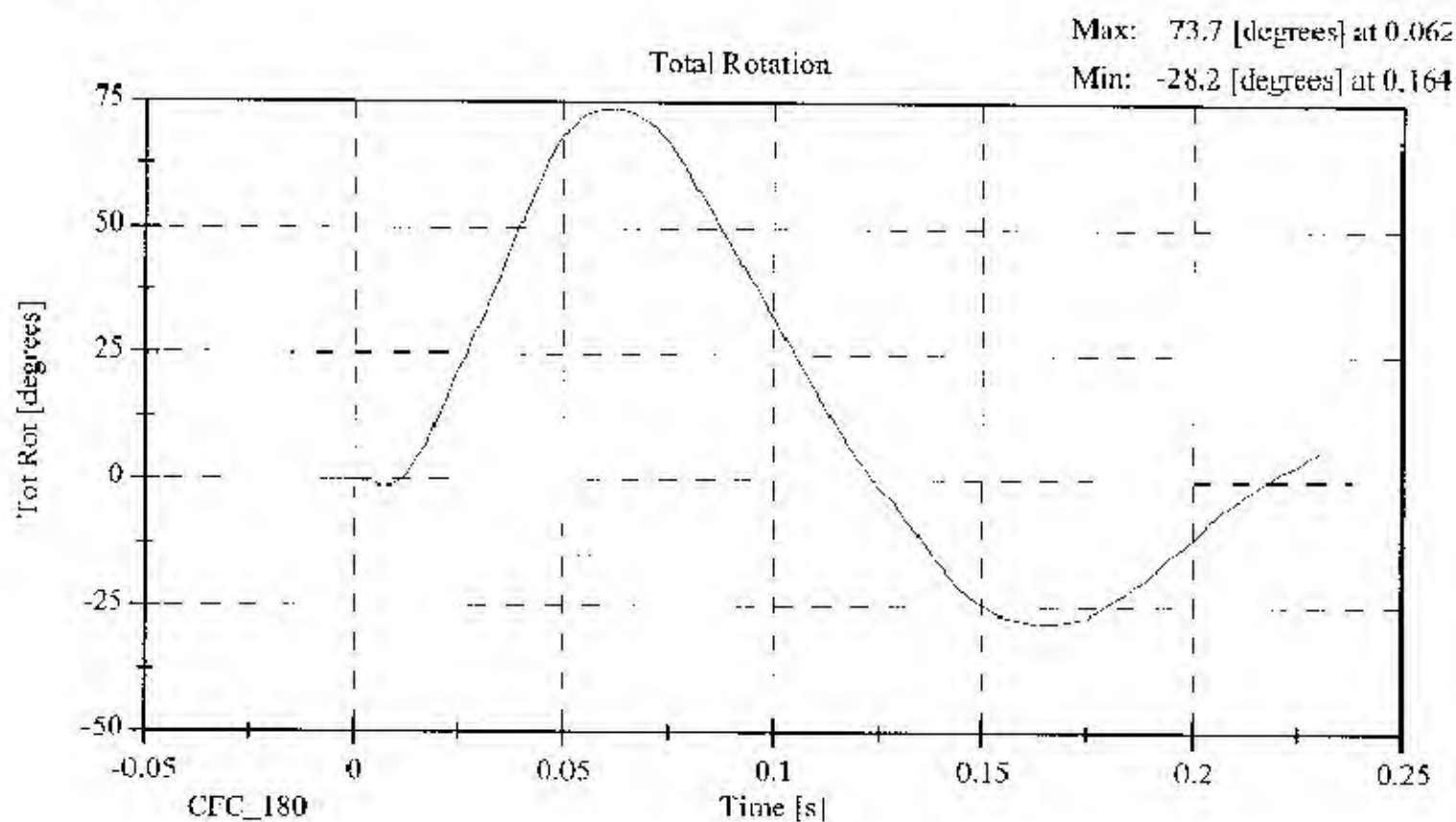
Neck Test



Neck Test



Neck Test



**ABDOMINAL COMPRESSION TEST
POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 13 mm (N)	104 - 162	111.2
FORCE @ 19 mm (N)	163 - 221	175.7
FORCE @ 25 mm (N)	222 - 280	258.0
FORCE @ 33 mm (N)	325 - 391	373.7

REMARKS: None

Dummy S/N 016

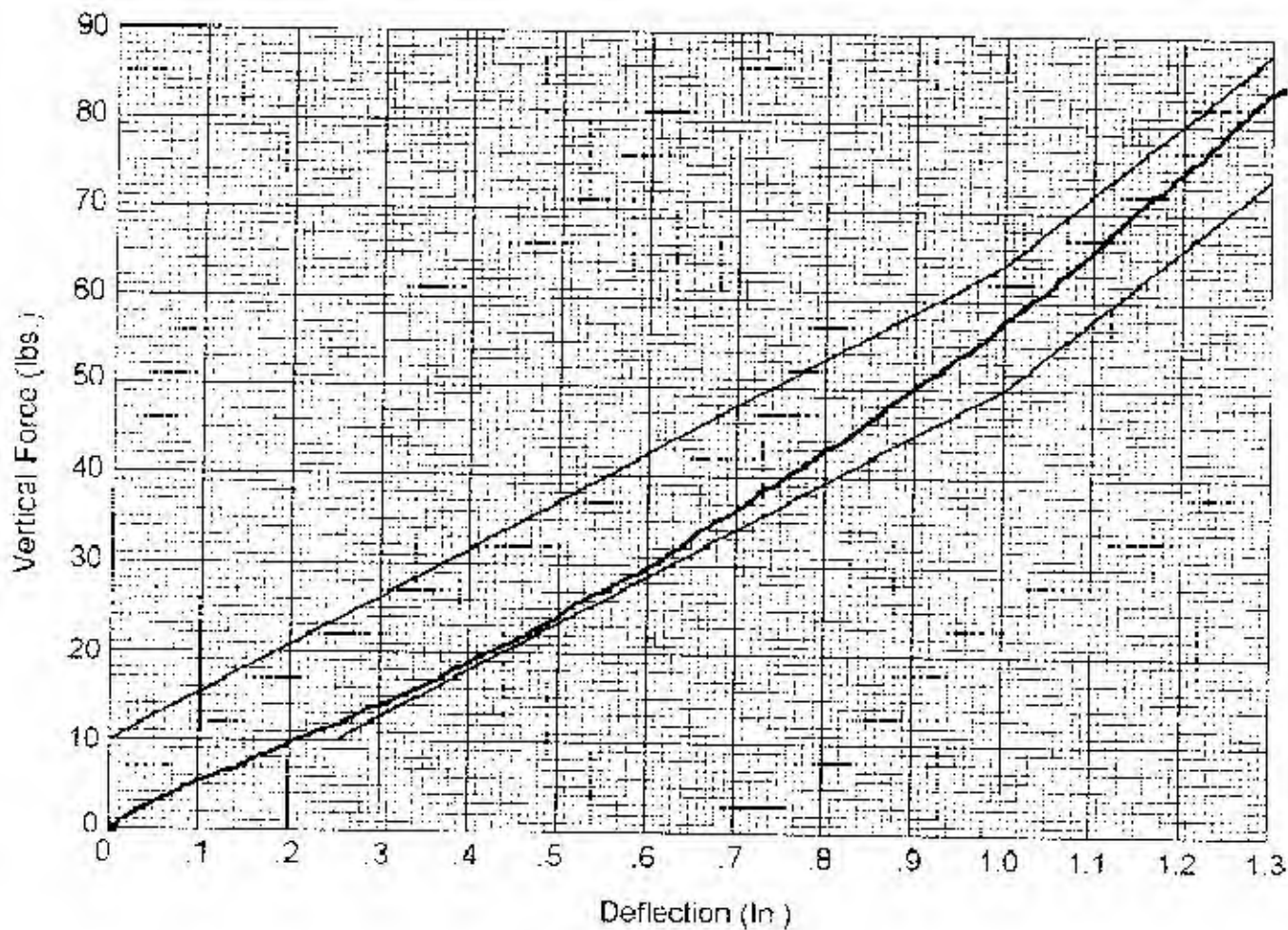
W/A _____

Date 5-9-03

Performed By [Signature]

Temp. 70°

Humidity 39%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
 (Test not required for SHD certification)

CONFIGURED FOR LEFT SIDE IMPACT

SHD H3 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	136.8
FORCE @ 30° (N)	151.2 - 204.6	166.8
FORCE @ 40° (N)	204.6 - 258	220.2
RETURN ANGLE	12° max.	3.5°

REMARKS: None

Dummy S/N

016

W/A

Date

5-8-03

Performed By

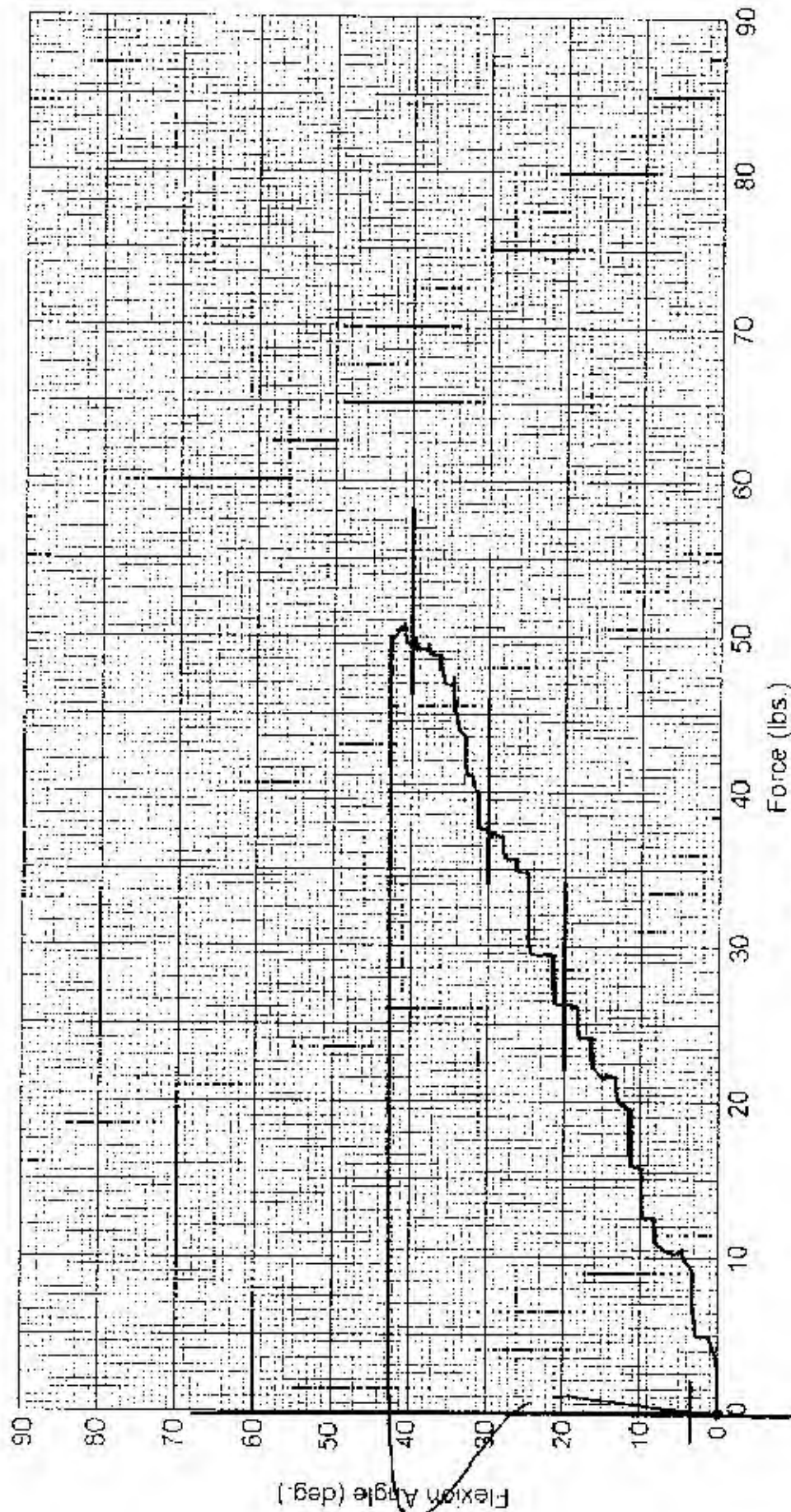
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Temp.

74°

Humidity

39%



Hybrid II Lumbar Spine Flexion Test

FM-352-CEPT-005-R00

PC 12/22/130-HWA

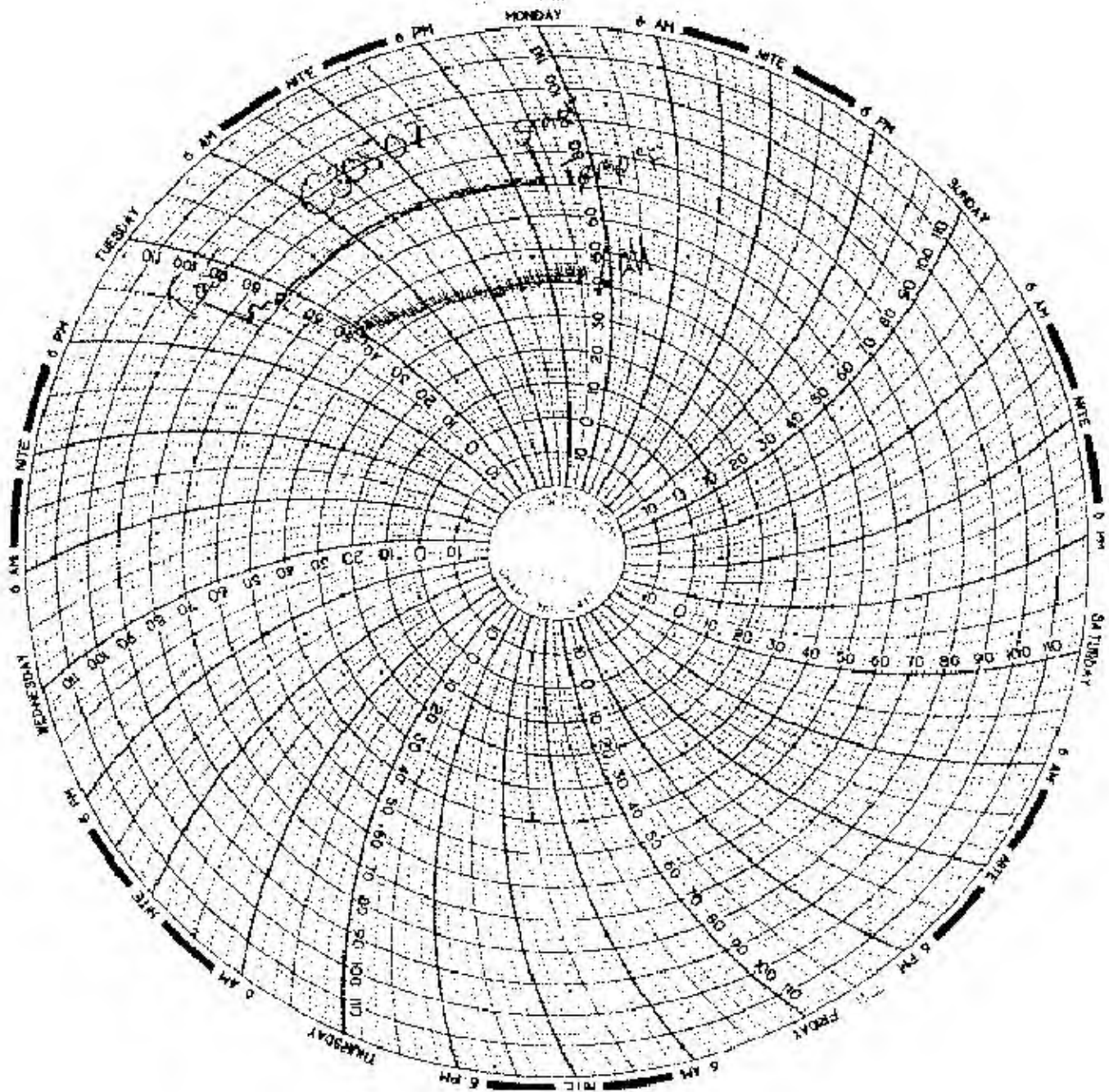
POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swicicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

TEMPERATURE TRACE



APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION
SID INSTRUMENTATION

FRONT SID NO.: 015			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
NAAH HEAD X ARM Y	AC-01G18-F06	ENTRAN	07-Apr-03
NAAH HEAD X ARM Z	AC-01B00113-F39	ENTRAN	07-Apr-03
NAAH HEAD Y ARM X	AC-001113-F14	ENTRAN	07-Apr-03
NAAH HEAD Y ARM Z	AC-01G18-F16	ENTRAN	07-Apr-03
NAAH HEAD Z ARM X	AC-01B00113-F72	ENTRAN	07-Apr-03
NAAH HEAD Z ARM Y	AC-01G18-F12	ENTRAN	07-Apr-03
HEAD AX	AC-P23993	ENDEVCO	04-Dec-02
HEAD AY	AC-P23939	ENDEVCO	04-Dec-02
HEAD AZ	AC-P23999	ENDEVCO	04-Dec-02
UPPER NECK FX	LC-260Fx	DENTON	12-Dec-02
UPPER NECK FY	LC-260Fy	DENTON	12-Dec-02
UPPER NECK FZ	LC-260Fz	DENTON	12-Dec-02
UPPER NECK MX	LC-260Mx	DENTON	12-Dec-02
UPPER NECK MY	LC-260My	DENTON	12-Dec-02
UPPER NECK MZ	LC-260Mz	DENTON	12-Dec-02
UPPER RIB	AC-P16862	ENDEVCO	18-Feb-03
LOWER RIB	AC-P16656	ENDEVCO	18-Feb-03
LOWER SPINE	AC-P16866	ENDEVCO	18-Feb-03
PELVIS	AC-P16676	ENDEVCO	18-Feb-03
UPPER RIB REDUNDANT	AC-P23156	ENDEVCO	18-Feb-03
LOWER RIB REDUNDANT	AC-P16645	ENDEVCO	18-Feb-03
LOWER SPINE REDUNDANT	AC-P19343	ENDEVCO	18-Apr-03
PELVIS REDUNDANT	AC-P16843	ENDEVCO	18-Feb-03

REAR SID NO.: 016			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
NAAH HEAD X ARM Y	AC-01G18-F08	ENTRAN	01-Apr-03
NAAH HEAD X ARM Z	AC-00L20-A13	ENTRAN	01-Apr-03
NAAH HEAD Y ARM X	AC-00L20-A08	ENTRAN	28-Mar-03
NAAH HEAD Y ARM Z	AC-01G18-F13	ENTRAN	28-Mar-03
NAAH HEAD Z ARM X	AC-01J02-F18	ENTRAN	28-Mar-03
NAAH HEAD Z ARM Y	AC-01G25-N11	ENTRAN	28-Mar-03
HEAD AX	AC-P23960	ENDEVCO	10-Nov-02
HEAD AY	AC-P23940	ENDEVCO	09-Nov-02
HEAD AZ	AC-P23899	ENDEVCO	10-Nov-02
UPPER NECK FX	LC-261Fx	DENTON	12-Dec-02
UPPER NECK FY	LC-261Fy	DENTON	12-Dec-02
UPPER NECK FZ	LC-261Fz	DENTON	12-Dec-02
UPPER NECK MX	LC-261Mx	DENTON	12-Dec-02
UPPER NECK MY	LC-261My	DENTON	12-Dec-02
UPPER NECK MZ	LC-261Mz	DENTON	12-Dec-02
UPPER RIB	AC-P18524	ENDEVCO	17-Feb-03
LOWER RIB	AC-P18533	ENDEVCO	17-Feb-03
LOWER SPINE	AC-P18514	ENDEVCO	17-Feb-03
PELVIS	AC-P18519	ENDEVCO	17-Feb-03
UPPER RIB REDUNDANT	AC-P18528	ENDEVCO	17-Feb-03
LOWER RIB REDUNDANT	AC-P18518	ENDEVCO	17-Feb-03
LOWER SPINE REDUNDANT	AC-P18688	ENDEVCO	17-Feb-03
PELVIS REDUNDANT	AC-P18531	ENDEVCO	17-Feb-03

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-P19253	ENDEVCO	10-Feb-03
RIGHT FRONT SILL (Y)	AC-P21392	ENDEVCO	10-Feb-03
RIGHT FRONT SILL (Z)	AC-P23138	ENDEVCO	10-Feb-03
RIGHT REAR SILL (X)	AC-P23926	ENDEVCO	13-Mar-03
RIGHT REAR SILL (Y)	AC-P23864	ENDEVCO	13-Mar-03
RIGHT REAR SILL (Z)	AC-P23854	ENDEVCO	13-Mar-03
REAR FLOORPAN ABOVE AXLE (X)	AC-J31026	ENDEVCO	14-Apr-03
REAR FLOORPAN ABOVE AXLE (Y)	AC-J30491	ENDEVCO	14-Apr-03
REAR FLOORPAN ABOVE AXLE (Z)	AC-J32831	ENDEVCO	14-Apr-03
LEFT REAR SILL (Y)	AC-D69	ICS	28-Apr-03
LEFT FRONT SILL (Y)	AC-D30	ICS	28-Apr-03
LEFT FRONT DOOR CENTERLINE (Y)	-	-	-
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D80	ICS	28-Apr-03
MID REAR OF LEFT FRONT DOOR (Y)	-	-	-
LEFT FRONT DOOR UPPER CL (Y)	-	-	-
MID REAR OF LEFT REAR DOOR (Y)	-	-	-
LEFT REAR DOOR UPPER CL (Y)	-	-	-
LOWER LEFT B-PILLAR (Y)	AC-8083-032	ICS	20-Nov-02
MIDDLE LEFT B-PILLAR (Y)	AC-9026-036	ICS	11-Nov-02
LOWER LEFT A-PILLAR (Y)	AC-8084-010	ICS	08-Nov-02
UPPER LEFT A-PILLAR (Y)	AC-J33198	ENDEVCO	16-Apr-03
FRONT SEAT TRACK (Y)	AC-8084-024	ICS	11-Nov-02
REAR SEAT TRACK (Y)	AC-8084-018	ICS	11-Nov-02
VEHICLE CG (X)	AC-J32832	ENDEVCO	16-Apr-03
VEHICLE CG (Y)	AC-J33376	ENDEVCO	16-Apr-03
VEHICLE CG (Z)	AC-J31095	ENDEVCO	14-Apr-03
MDB CG (X)	AC-C16433	ENDEVCO	17-Apr-03
MDB CG (Y)	AC-C16416	ENDEVCO	17-Apr-03
MDB CG (Z)	AC-C16499	ENDEVCO	17-Apr-03
MDB REAR FRAME MEMBER (X)	AC-C14948	ENDEVCO	17-Apr-03
MDB REAR FRAME MEMBER (Y)	AC-C16680	ENDEVCO	15-Apr-03

REMARKS: None